CONCEPT IQ

1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
A1 A2 A3 A4
0 ARM HOME FAULT PWR +
NEXT
CLR
OFF
#
CONCEPT IQ
Areas: 1 2 3
Zones: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Panic 1 & 3
Fire 4 & 6
Medical 7 & 9

INSTALLATION AND PROGRAMMING MANUAL

Contents

Section 0.	Title and Document Version log. (This sheet)
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Part Number: 630047

Document Revisions

This table shows the current Version numbers of all documents in the "Concept IQ Installation and Programming Manual".

This table can be used when checking the Website for updates. http://www.innerrange.com

When you replace any documents in this manual with new Versions, ensure that this table is updated or replaced with the latest Version from the Website.

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Disclaimer

1) The manufacturer and/or it's agents take no responsibility for any damage, financial loss or injury caused to any equipment, property or persons resulting from the correct or incorrect use of the Concept IQ system and its peripherals. The purchaser assumes all responsibility in the use of the Concept system and its peripherals.

2) Whilst every effort has been made to ensure the accuracy of this manual, Inner Range Pty Ltd assumes no responsibility or liability for any errors or omissions. Due to ongoing development the contents of this manual is subject to change without notice. Check regularly with your supplier or the Website for updates.

Warranty

Inner Range Pty Ltd is proud of the reputation it has gained in the provision of high quality electronic products. Exhaustive factory and field testing ensure that enhanced system programming features and additional hardware components operate as expected prior to their release to our customers. Extensive function testing is carried out on every Inner Range Concept product prior to it leaving the factory.

It is our intention to completely satisfy the requirements of our customers. To that end, Inner Range Pty Ltd stands behind its products with confidence. A Two Year Warranty accompanies every Inner Range Concept product. Should any Concept product fail to function as intended by the manufacturer within this period, it should be returned to the distributor and the fault or symptom detailed. Inner Range will, at its own discretion, repair or replace the product as soon as possible.

This Warranty does not cover product failures occurring wholly or in part as a result of misuse, malicious damage, accidental damage or acts of nature.

CONCEPT IQ

SECTION 1.
INSTALLATION.

Contents

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2. Control Module 3
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4. Programming Key 8
5. Enhanced LED Terminal 9
6. Expansion Card 11
7. DTMF Card 13

NOTE: Factory Default PIN Codes:

User 1. Installer: 2 3 4 5

User 2. Master User: 0 1 2 3

Installer and Master User Operations.

Adding / Changing / Deleting Users. **NEXT 20** *See Section 11: Users*

View history. **NEXT 21**

Press [OFF #] to view the Next Event. Press [ON *] to view the Previous Event.

If the are no further events to be displayed, one long beep will sound.

History Event Types: Arm: <ARM> Lamp. Armed in Home Mode: <HOME> Lamp.
Dis-arm: <ARM> and <0> Lamp. Zone Input in alarm: <Zone 1> to <Zone 16> Lamp.
System Inputs in alarm: <0> Lamp.

Walk test mode. **NEXT 22**

Press [HOME] to switch between Alarm Test Mode and Tamper Test Mode.

Any Zone Input in the Terminal's Associated Area that goes into the Alarm (Un-sealed) or Tamper state will cause:
- The corresponding Zone Lamp to fast flash on an Alarm state in Alarm Test Mode.
- The corresponding Zone Lamp to slow flash on a Tamper state in Tamper Test Mode.
- The Siren to sound for 3 seconds.
- The Terminal beeper to emit a short beep.

Setting the Real-Time Clock. **NEXT 23** *See Section 4: Time Programming.*

Auxiliary Control and Test mode. **NEXT 24**

Enter the Auxiliary Output number ['n'] ['n'] (1 or 2 digits);

then Press: [ON *] to turn the Auxiliary ON OR: [OFF #] to turn the Auxiliary OFF.

When testing the Auxiliary, remember to return the Auxiliary to it's original state before exiting Auxiliary Control Mode.

Fault Analysis mode. **NEXT 25** *See Section 7: System Inputs*

System Inputs that are currently in Alarm will be indicated by Fast flashing on the relevant Zone Lamp. (See "System Input Mapping" in Section 7)
These Alarms cannot be acknowledged until the problem is rectified.

Acknowledge any previous Faults and Alarms.

Press [HOME]. System Inputs that have been in Alarm but subsequently restored since the last Acknowledgement will be indicated by Slow flashing on the relevant Zone Lamp. Note the datails of the Alarm/s displayed.

Press [OFF #] to Acknowledge and Clear any of the Faults or Alarms that are not currently in Alarm.

IMPORTANT NOTES:
1) Press [HOME] to toggle between the "Current Alarms" & "Previous Alarms" displays.
2) Zone Self-test (Lamp 10) can only be cleared from "Zone Self Test Display" Mode (NEXT 26).
3) Door Alarm (Lamp 15) can only be cleared from "Acknowledge Door Alarms" Mode (NEXT 29).

Zone Self Test display. **NEXT 26**

The Zone 1 to Zone 16 Lamps will indicate any Zones that have failed the Zone Self Test so that appropriate action may be taken. e.g. A detector fault may need to be rectified by the Installer. Press [OFF #] to acknowledge any Zone Self Test faults.

Edit Telephone numbers. **NEXT 27** *See section 10: Communications.*

View Software Version number. **NEXT 28**

The 1st digit of the 4-digit Version number is displayed by the corresponding Zone Lamp flashing.

To display each of the remaining digits of the Version number press the [NEXT] key.

Acknowledge Door Alarms. **NEXT 29**

Door Alarms will be indicated by the relevant Zone Lamp 1 to 4. Note the datails of the Alarm/s displayed.

Press [OFF #] to Acknowledge any Door Alarms.

De-Isolate System Inputs.	**NEXT 90**	De-Isolates any Isolated System Inputs.
Test Siren speaker and Strobe (Aux. 1).	**NEXT 91**	Triggers Siren and Strobe (Aux 1) for 3 Seconds.
Battery Test.	**NEXT 92**	Switches off the Battery charger for 5 seconds.
Test Transmission. (Test report)	**NEXT 93**	Triggers Test report via selected Dialer format.
Day Alarm on / off.	**NEXT 94**	Toggles Day Alarm Enabled/Disabled.
Reset Latching Auxiliaries.	**NEXT 96**	Resets all latched Auxiliaries.
Answer Phone	**NEXT 97**	Forces Control Module to answer incoming call.
Reset Smoke Detectors.	**NEXT 99**	Triggers the "Smoke Detector Reset" Aux Event.

Control Module. 995501

Contents

Control Module Parts List 1
Specifications 1
Installation Procedure 2
Connection Details. Zone Inputs (Detectors), Tamper switch and Fuses 3
Mode 3 Telephone line connection 3
Connection Details. Power, Warning devices & LAN 4

Control Module Parts List

- Control Module PCB mounted in metal enclosure.
- User Manual.
- Installation Manual. (This document)
- Installation Kit containing:
  - 4 x Pan Head Self-tapping screws 4x6mm. Used to secure the enclosure cover.
  - 5 x plastic “D” bungs. Must be fitted to all unused cable entry cutouts in the cover.
  - Telecom Line cord. (Note: Non-standard configuration. Only suitable for use with this product)
  - 10 x 3k3 End-of-line resistors. (orange-orange-black-brown-brown) Used for Single EOL / Dual EOL / Zone Doubling.
  - 10 x 6k8 End-of-line resistors. (blue-grey-black-brown-brown) Used for Dual EOL or Zone Doubling.
  - 10 x 1k End-of-line resistors. (brown-black-black-brown-brown) Used for Zone Doubling.
  - Tamper switch.
  - Tamper switch bracket.
  - 2 x 6 Way plug-on screw terminals. (Only for PCBs that do not have fixed terminal blocks fitted)
  - 1 x 3 Way plug-on screw terminals. (Only for PCBs that do not have fixed terminal blocks fitted)
  - 5 x 2 Way plug-on screw terminals. (Only for PCBs that do not have fixed terminal blocks fitted)
  - 2 x 6.3mm Tamper switch connectors.
  - Battery connection lead, 220mm, pre-assembled.
  - 1 x 1 Amp M205 (20mm) Fuse. (Spare)

Electrical Specifications

Power Supply I/P:	Plug pack Mains Supply:	240V AC -10% / +10%. 50 Hertz.
	Plug pack Output:	16V AC. 1.0 Amperes.
	PCB AC Input Voltage:	16V AC.
	Battery Capacity:	12V. 7AH. Sealed Lead Acid Battery.
	DC Operating Voltage (Batt I/P)	9.5 to 14 V DC. (Low Battery alarm activated at 11.2V +/- 0.3V)
	Battery Input Fuse:	1 Ampere.
Power Supply O/P:	Current:	**Total combined current required by devices connected to “DET+” and “LAN+” must not exceed 600 milliAmps**.
	Fuse Protection:	1 Ampere. (DET+ and LAN+)
Auxiliary Outputs:	OUT1 (Strobe) / OUT2	Max. switched current = 200mA per Auxiliary. (Open Collector)
Siren Output (SPK):	Maximum Load:	8 Ohms. (i.e. **1 x 8 Ohm Speaker only**. Additional speakers must not be connected in parallel)

NOTES: 1) ALWAYS REPLACE FUSES WITH THE SAME FUSE TYPE AND VALUE!
2) See data supplied with detectors and output devices for current consumption.

Mechanical Specifications

Dimensions:	Height: 260 mm.	Width: 265 mm.	Depth: 80 mm.
Weight:	4.2 kg. (Cabinet & cover, PCB and 7AH battery)		Plug pack = 0.6kg

Environmental Specifications

Continuous Operating Temperature	0 to +50 °C
Storage Temperature	-20 to +70 °C
Relative Humidity (Non condensing)	15 to 85 %

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Installation Procedure

1. **Installer.** The system must be installed and maintained by a competent, qualified installer who holds appropriate licences for Telecommunications and Security System cabling in accordance with local Regulations.

2. **Location.** The Control Module must be installed in a secure location near an AC Power outlet and Telephone line connection. Install the unit where it will not be subject to temperature or humidity outside the specified range, and will not come into contact with water, other liquids, high dust levels or chemical atmospheres.
   Adequate ventilation must be provided around the cabinet (50mm min.) to ensure that heat from any other source does not cause the Control Module to operate at an unsafe temperature.

3. **Positioning.** Orientation of the cabinet MUST be as per the illustration below with the battery at the bottom.
   Fit the Tamper switch into the hole provided in the Tamper switch bracket. The Tamper switch bracket must be positioned in the slot provided and under the base of the cabinet, before the cabinet is secured to the wall.
   When wired to the "TAMP" input, Tamper switch alarms if the cabinet is removed from the wall or the cover is opened.

4. **Mounting.** The cabinet must be secured to a flat, solid, vertical surface using appropriate fasteners through the 4 holes provided in the base, and must be positioned to provide unhindered access for installation and maintenance.
   The two mounting holes in the top of the cabinet are keyhole slots to assist with positioning.
   When mounting onto flammable surfaces, a fire protection backplate MUST BE INSTALLED.

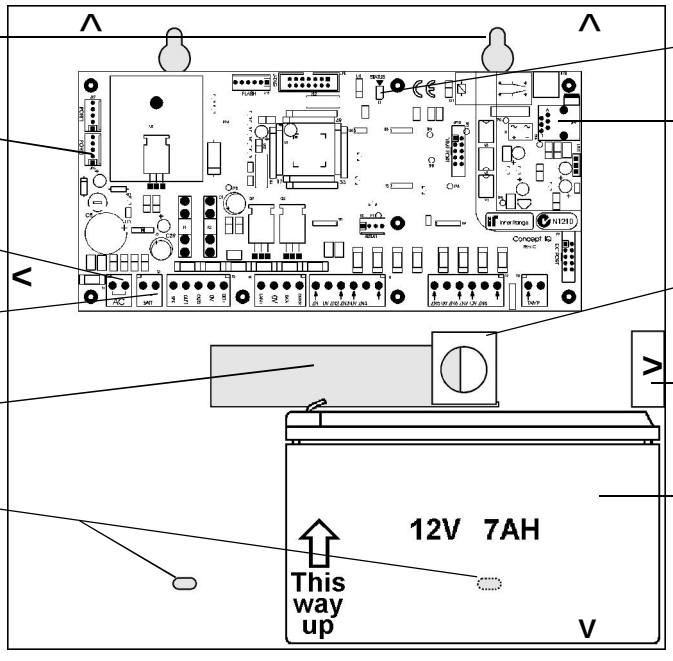
5. **Power.** Strip 5mm of insulation from the ends of the 3 Plug pack cable conductors. Terminate the 16VAC conductors into the "AC" Input connections, and the Earth wire (Green/Yellow) into "BATT-" on the PCB.
   CAUTION: Do not connect the Plug pack to an AC outlet until all wiring is complete and checked.

6. **Battery.** Connect the pre-assembled battery cable into the "BATT+" and "BATT-" connections on the PCB.
   CAUTION: Do not connect the Terminals to the Battery until all wiring is complete and checked.

7. **Cabling.** All cabling must enter the cabinet via the existing cutouts provided in the rear and sides. Additional holes must not be cut in the cabinet. Installation of Cables both inside the cabinet, and external to the cabinet, must conform to the appropriate Standards for Security and Telecommunications systems.
   Cables must be protected at the entry points by grommets or by allowing the conduit to protrude into the cabinet.
   The "D" Bungs provided must be fitted to all unused cable entry cutouts.
   DO NOT connect the LAN "CLK" & "DATA" wires to the Control Module until all LAN Modules (e.g. LED Terminals) are Commissioned.

8. **Diagnostics.** The "STATUS" Lamp on the Control Module can be used to assist with troubleshooting and testing.
   SLOW FLASHING: MicroProcessor OK (Running) FAST FLASHING: Controller is Dialing.
   NOT FLASHING: MicroProcessor Not running, OR Programming Key Upload or Download in progress.

9. **Cover.** In order to comply with regulations the cover must always be correctly re-fitted following any installation or maintenance work. Engage the hinges on the Left-hand side and fasten the cover tightly to the cabinet using all four (4) of the screws provided. Screw holes are located on both edges of the two Right-hand side corners.



Top mounting holes (x2). *Step 4.*

Port 0. Serial Comms Port. (Prog. Key or PC)

T1. 16V AC Power connections. *Step 5.*

T3. Battery connections. *Step 6.*

Rear cable entry cutout. *Step 7.*

Bottom Mounting Holes (x 2). *Step 4.*

STATUS Lamp. *Step 8.*

JP9. Mode 3 Line Socket for connection to Telecom Line. (Special cable supplied must be used)

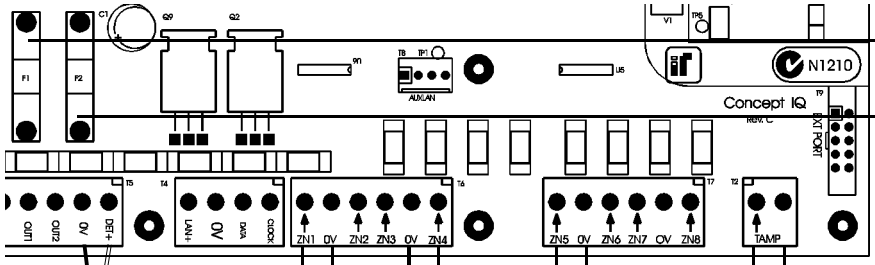
Tamper switch bracket. (and Battery retainer) *Step 3.*

Latch for optional lock.

12V, 7AH Battery position. *Step 6.*

< Location of Side Cable entries. *Step 7.*

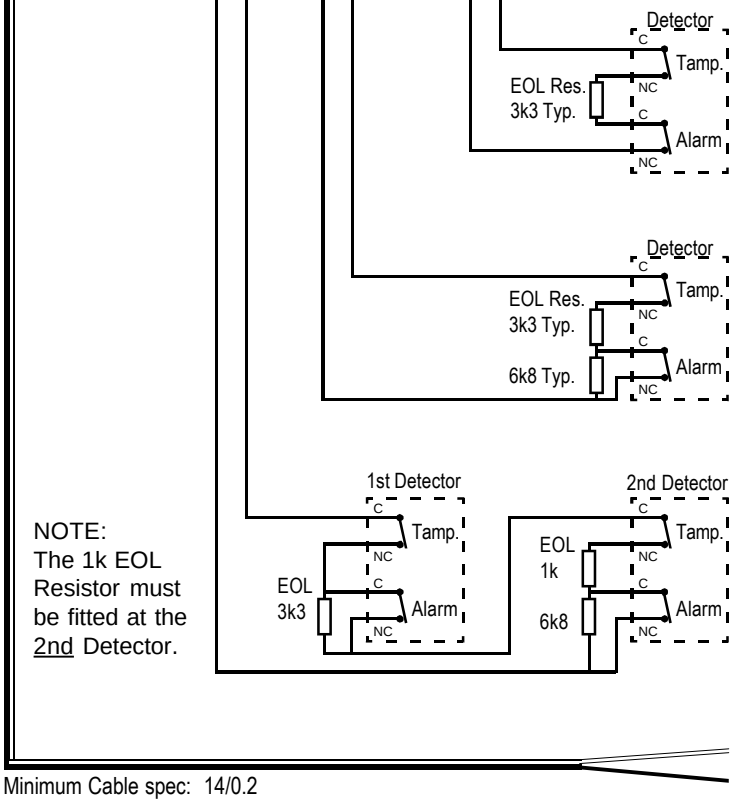
Connection Details. Detectors, Tamper switch and Fuses



F1. Battery Input Fuse. 1A. M205.

F2. PWR Fuse. 1A. M205.

T2. "TAMP". Dedicated Cabinet Tamper input. Tamper switch supplied.
No End-of-line resistors necessary.



T6 and T7. Zone Input connections.

Single End-of-Line.
e.g.

3k3	Seal
Open Cct:	Alarm

Dual End-of-Line.
e.g.

3k3	Seal
10k1	Alarm
Open Cct:	Tamper
Short Cct:	Tamper

Zone Doubling.

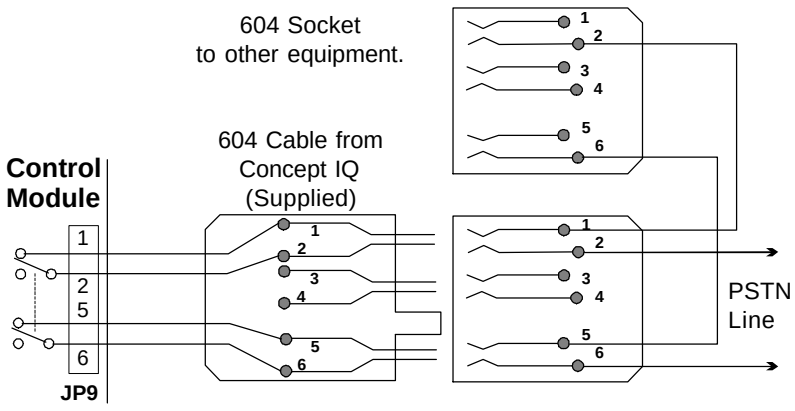
1k	Seal
4k3	1st Zone in Alarm
7k8	2nd Zone in Alarm
11k1	1st & 2nd Zones in Alarm
Open Cct:	Tamper
Short Cct:	Tamper

T5. "DET+" and "0V".
Detector Power connections.
12V Supply for Detectors and Auxiliary Devices. Total combined current sourced from "DET+" and "LAN+" must not exceed 600 milliAmps.

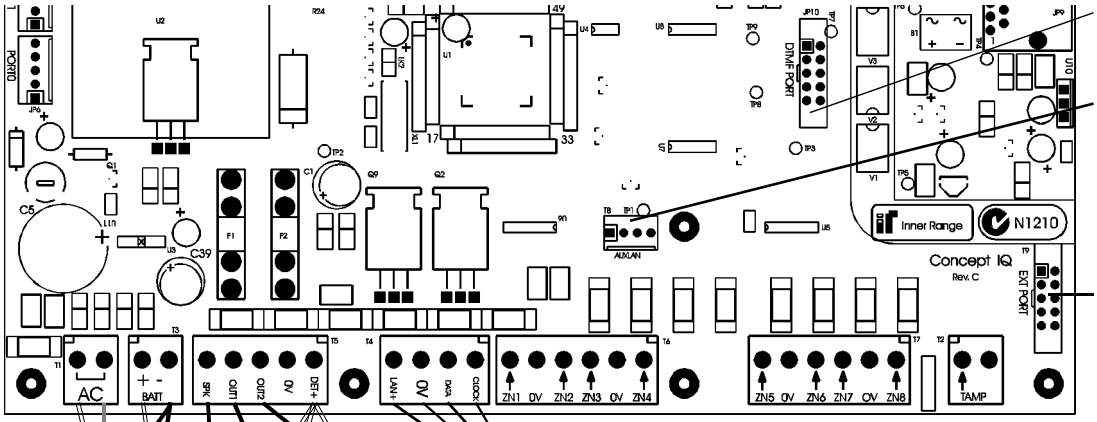
NOTE: Zone Input connections. "Normally Open" Alarm Contacts.

Normally Open Alarm Contacts (e.g. As often found on Smoke Detectors) are wired in the same manner as Normally Closed contacts.
When programming the Zone Input, Option 8 ("Normally Open") in the "Zone Options" must be selected. (Addresses 752 [Zone 1] to 767 [Zone 16])

Mode 3 Telephone Socket Wiring for Australia



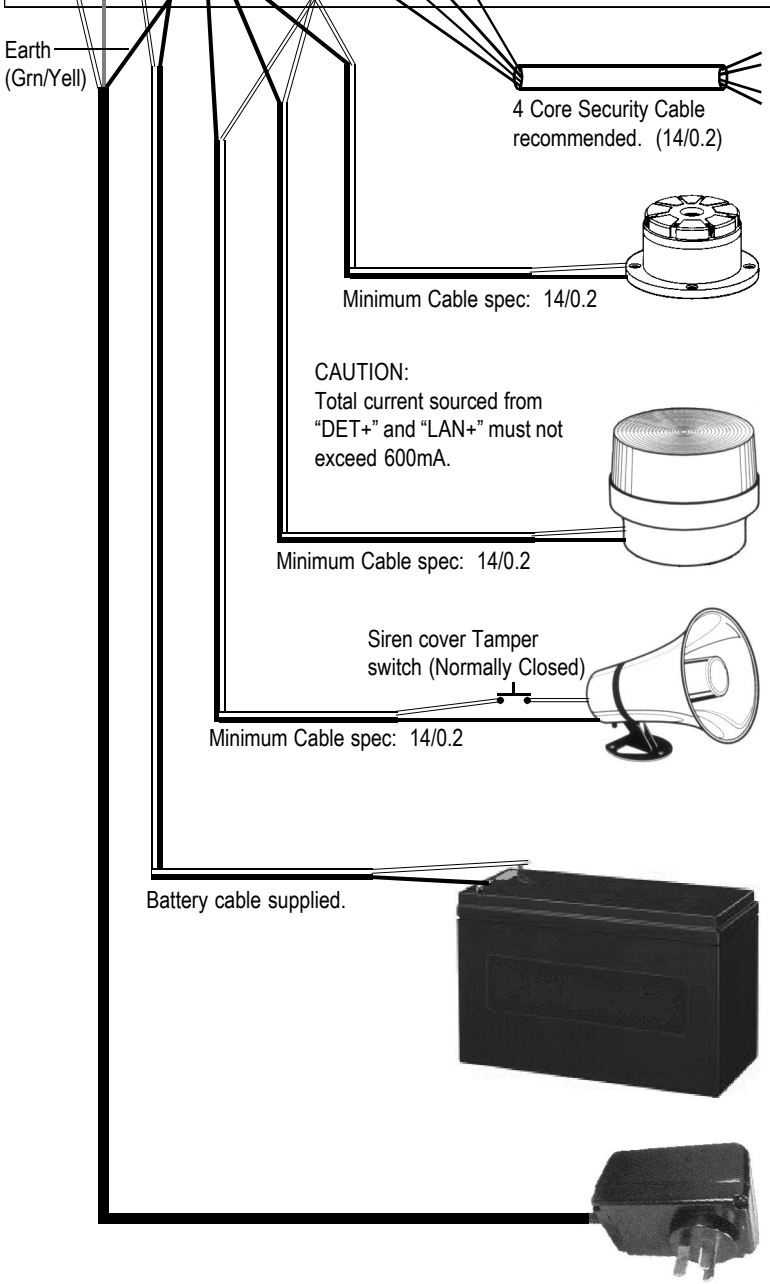
Connection Details. Power, Warning devices & LAN



JP10. DTMF/Voice Card Port.

T8. "Aux LAN". For temporary connection of a Terminal for diagnostic purposes.

T9. Zone Input / Auxiliary Output Expansion Bus Port.



T4. LAN connections to Terminals. (Up to 4)
Maximum run to furthest LAN Module: 100m.
Total LAN cabling: 150m maximum.
If twisted pair cable is used, DO NOT combine "Clock" & "Data" on the same pair.

T5. "OUT2" & "DET+".
Auxiliary 2 Output. General purpose Aux.
May be used for Piezo Siren.
(Program Aux 2 as Event Type 59)
Maximum switched current: 200 mA.

T5. "OUT1" & "DET+" (Strobe)
Auxiliary 1 Output.
Normally used for Strobe.
Maximum switched current: 200 mA.

T5. "SPK" & "DET+"
Siren Speaker output.
Maximum load: 8 Ohms
Minimum Speaker rating: 10 Watts.
(i.e. **1 x 8 Ohm Speaker only**. Additional speakers must not be connected in parallel)

NOTE: A 6k8 Resistor must be connected between "SPK" & "DET+" if Siren speaker not connected.

T3. "+" & "-".
12V Sealed Lead Acid Battery connection.
Maximum Battery capacity: 7 AH

T1. "AC".
16V AC Input.
(Connect Green/Yellow Earth wire to T3 "-")

Disclaimer: 1. The manufacturer &/or it's agents take no responsibility for any damage, financial loss or injury caused to any equipment, property or persons resulting from the correct or incorrect use of the system or it's peripherals. The purchaser assumes all responsibility in the use of the system and it's peripherals.
2. While every effort has been made to ensure the accuracy of this manual, the manufacturer assumes no responsibility or liability for any errors or omissions. Due to ongoing development, this manual is subject to change without notice.

Standard LED Terminal. 995500

The LED Terminal is the main operator interface for the Concept IQ system.
The Terminal provides status display of 16 Zone Inputs and 4 Areas along with indication of “Power”, “Fault”, “Home Mode” and “Armed” conditions. Audible button press feedback is provided and the built-in Beeper also provides indication of Alarms, Entry/Exit warnings, Auto-Arm warning, User Operation OK and User Operation Unsuccessful.
While the system can be programmed via Upload/Download software, the LED Terminal also provides the ability for the Installer to program all system parameters.

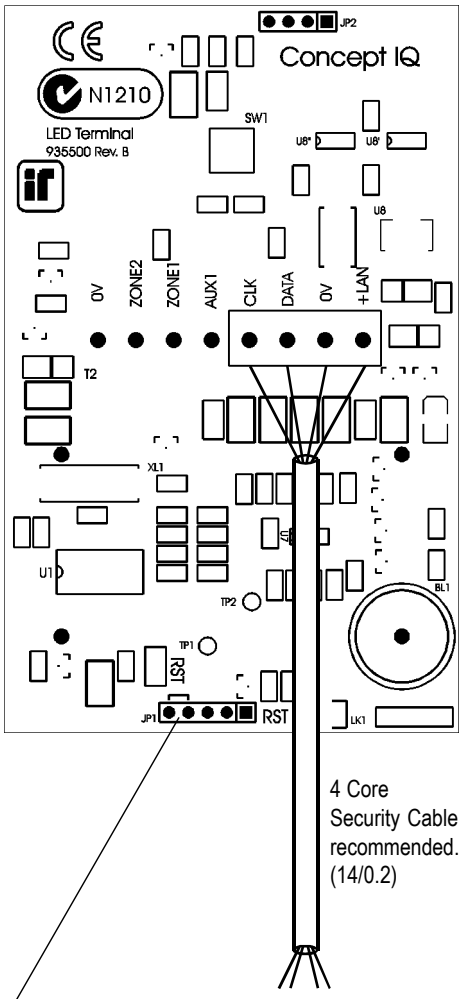
INSTALLATION.

Mounting the Terminal.

- The Terminal must be installed on a flat, vertical surface in an appropriate location. Ensure that the display will be at, or slightly below eye level, for all Users.
- Remove the rear mounting plate from the back of the Terminal.
- Cut suitable holes in the mounting surface for cable entry and the fasteners. (The rear mounting plate can be used as a template)
  NOTE: The Terminal is also designed to be mounted on plasterboard/ gyprock surfaces using a standard switch plate Mounting Clip. e.g. Clipsal 154 or HPM 712. (84mm mounting centres)
- The rear mounting plate can now be installed using appropriate fasteners through the holes provided. Remember to insert the LAN cable and any other wiring through the cable entry cutout first.
- Connect the wiring into the Screw Terminal block T2.
- Clip the Terminal onto the rear mounting plate by first locating the tongue at the top of the Terminal into the slot provided by the rear mounting plate, then clip the bottom of the Terminal into place.

LAN connection. A maximum of 4 LAN Modules can be connected to the system LAN. The LAN must be connected as follows:

- Recommended cable is 4 core or 6 core security cable 14/0.20. (NOT twisted pair. Twisted pair cable [e.g. Category 5] may be used, however, DO NOT combine “Clock” & “Data” on the same pair)
- Do not apply power to cable until all connections are made & checked.
- Maximum cabling distance from the Control Module to the furthest Module must not exceed 100 metres.
- Maximum total LAN cabling in the system must not exceed 150 m.
- DO NOT connect the “CLK” & “DATA” wires to the Control Module until all LAN Modules (e.g. Terminals) are Commissioned. (See below)



LAN connections to the Control Module T4 connector.

ADDRESSING & COMMISSIONING (Read “LAN connection” first)

1. **Enable Terminal Configuration Mode.**
   Method 1: -Remove power from the Terminal.
   -Hold down the <NEXT> and <HOME> keys.
   -Re-apply power to the Terminal.
   -Release the <NEXT> and <HOME> keys.

   Method 2: -Hold down the <NEXT> and <HOME> keys.
   -Short the “RST” (Reset) link on the rear of the Terminal.
   -Release the <NEXT> and <HOME> keys.
2. **Note the current Address setting.** The current Address of the Terminal will be displayed via the Zone 1 to 4 Lamps. The Zone Lamp number that corresponds to the current Address will flash.
3. **Select the new Terminal Address number.**
   -Press the key that corresponds to the required Address (1 to 4) within 10 seconds, then press <ENTER>.
   -When the <ENTER> key is pressed, the Terminal will exit Terminal Configuration Mode.
4. **Initialize the LAN.** If a new Terminal is added to an existing system, once the Terminal is configured and connected to the system LAN, the LAN must be initialized by Removing and Re-applying power to the Control Module. Remember to disconnect the battery also when removing power.
5. **Area Assignment.** Additional system programming allows Terminals to be configured for Single Area or Multi-Area Mode (Address 961), and an “Associated Area” to be defined for each Terminal (Addresses 952 to 955).

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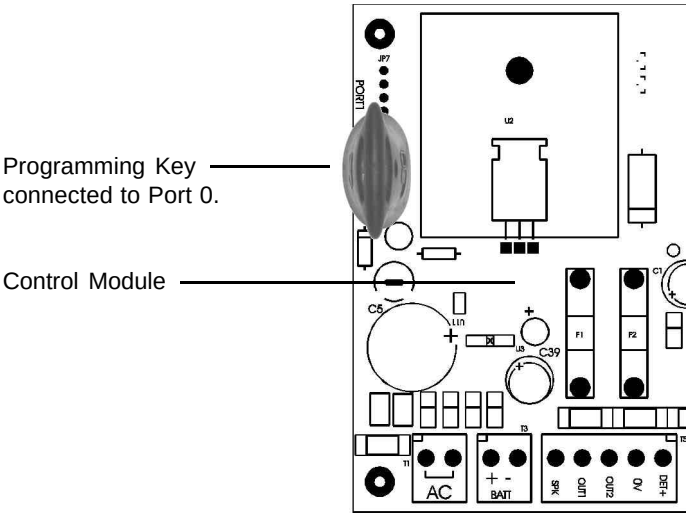
Programming Key. 995510

The Concept IQ Programming Key is a portable non-volatile memory device housed in a convenient “key tag”.
The Programming Key connects directly to the Control Module Port 0 and allows the Installer to Upload the system database from the Control Module, or Download a system database to the Control Module via a simple key press sequence on the LED Terminal.

An indicator lamp is provided on the Programming key to monitor data transfer activity, and the LED Terminal provides audible indication of Upload/Download Successful/Failed.

Programming Key Parts List

- Programming key.
- Instruction Manual. (This document)



OPERATION.

Importing Data from the Programming Key.

This Mode allows the Installer to copy the programming contents of the Programming Key into the Control Module.

IMPORTANT NOTE: The new data will override the existing contents of the Control Module memory.

Connect the Programming Key to Serial Port 0 on the Control Module.

Select the Import Data Mode:
Enter PIN; 'n' 'n' 'n' 'n'... , then NEXT , then the Mode number; 0 , 3 .

The Lamp on the Programming Key will flash slowly to indicate data is being copied.
The Terminal beeper will sound 3 short beeps if the operation was successful, or 1 long beep if unsuccessful.

Export Data to the Programming Key.

This Mode allows the Installer to copy the programming contents of the Control Module into the Programming Key.

IMPORTANT NOTE: The Control Module data will override the existing contents of the Programming Key.

Connect the Programming Key to Serial Port 0 on the Control Module.

Select the Export Data Mode:
Enter PIN; 'n' 'n' 'n' 'n'... , then NEXT , then the Mode number; 0 , 4 .

The Lamp on the Programming Key will flash quickly to indicate data is being copied.
The Terminal beeper will sound 3 short beeps if the operation was successful, or 1 long beep if unsuccessful.

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Enhanced LED Terminal. 995500EN

The Enhanced LED Terminal is a versatile operator interface for the Concept IQ system providing standard LED Terminal functions along with an interface for Door Access Control. The Terminal provides status display of a single "Associated" Area and up to 16 Zone Inputs along with indication of "Power", "Fault", "Home Mode" and "Armed" conditions.
Audible button press feedback is provided and the built-in Beeper also provides indication of Alarms, Entry/Exit warnings, Auto-Arm warning, User Operation OK and User Operation Unsuccessful.
While the system can be programmed via Upload/Download software, the Terminal also provides the ability for the Installer to program all system parameters.

In addtion to these standard functions, the Enhanced Terminal also provides:
-Single low power open-collector Door Unlock Output. (Programmable un-lock time; 0 to 60 seconds)
-Two multi purpose inputs configurable as Wiegand Reader Data inputs and REX / Door Sealed.

INSTALLATION. ***Connection diagrams provided on the next page.***

Mounting the Terminal.
- IMPORTANT: Enhanced Terminals must be installed on the inside (secure side) of the Door to be controlled.
- The Terminal must be installed on a flat, vertical surface in an appropriate location. Ensure that the display will be at, or slightly below eye level, for all Users.
- Remove the rear mounting plate from the back of the Terminal.
- Cut suitable holes in the mounting surface for cable entry and the fasteners. (The rear mounting plate can be used as a template)
  NOTE: The Terminal is also designed to be mounted on plasterboard/gyprock surfaces using a standard switch plate Mounting Clip. e.g. Clipsal 154 or HPM 712.
- The rear mounting plate can now be installed using appropriate fasteners through the holes provided. Remember to insert the LAN cable and other wiring through the cable entry cutout first.
- Connect the wiring into the Screw Terminal block T2.
- Clip the Terminal onto the rear mounting plate by first locating the tongue at the top of the Terminal into the slot provided by the rear mounting plate, then clip the bottom of the Terminal into place.

LAN connection. A maximum of 4 LAN Modules can be connected to the system LAN.
- Recommended cable is 4 core or 6 core security cable 14/0.20. (NOT twisted pair. Twisted pair cable [e.g. Category 5] may be used, however, DO NOT combine "Clock" & "Data" on the same pair.)
- Do not apply power to cable until all connections are made and checked.
- Maximum cabling distance from the Control Module to the furthest Module must not exceed 100 metres.
- Maximum total LAN cabling in the system must not exceed 150 metres.
- DO NOT connect the "CLK" & "DATA" wires to the Control Module until all LAN Modules (e.g. Terminals) are Commissioned. (See next page)

Wiegand Reader connection. Note: Supports 12V Reader power supply only. (No 5V supply option)
- The Reader "+", "-", "D1" & "D0" wires must be connected to "+LAN", "0V", "Zone1" & "Zone2" on the Terminal using Shielded RS232 Data cable. e.g. Tycab DMC6702, Electra EAS7206, Belden 9536, Alpha 1296C, etc.
  DO NOT use Twisted pair cable or Security cable under any circumstances.
  NOTE: Check that there is sufficient current still available from the LAN power to supply the Reader. If not, a separate power supply must be used for the Reader power.
- Diodes must be inserted in series with each of the D0 and D1 connections. Cathode to Reader.
  Ensure that appropriate insulating sleeve is fitted over the Diodes and solder connections.
- Maximum cabling distance from the Reader to the Terminal must not exceed 80 metres.

Door Reed switch and Request to Exit button (REX) connections.
- The "Normally Open" Request to Exit (REX) button (if used) is connected between the "Zone 1" Input and "0V". A 6k8 Resistor must be connected in series with the button.
- The "Normally Closed" Reed switch (if used) is connected between the "Zone 2" Input and "0V". A 6k8 Resistor must be connected in series with the Reed switch.

Lock Relay connection.
- The Lock power must be switched via a Relay to provide isolation from the Terminal circuits.
  e.g. 995085 -1A DPDT Relay Board, or 995083S -2x10A Relay Board.
- The Relay control input is connected to "+" and "AUX1" on the Terminal.
- The power to the lock must be wired from a separate lock power supply, through the appropriate Relay contacts, and must not make any connection to the Terminal wiring.

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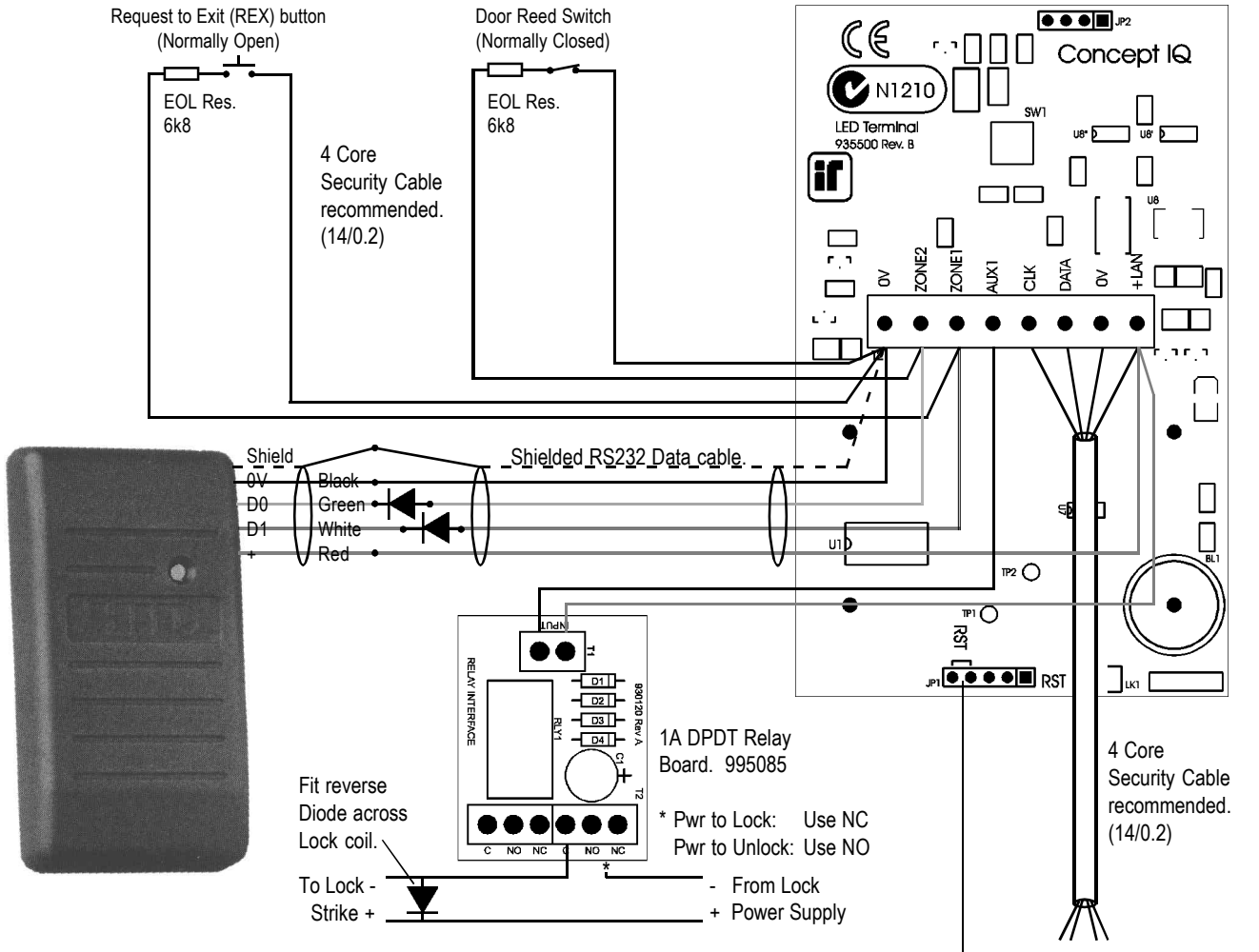


ADDRESSING & COMMISSIONING (Read "LAN connection" first)

1. **Enable Terminal Configuration Mode.**
   Method 1: -Remove power from the Terminal.
   -Hold down the <NEXT> and <HOME> keys.
   -Re-apply power to the Terminal.
   -Release the <NEXT> and <HOME> keys.

   Method 2: -Hold down the <NEXT> and <HOME> keys.
   -Short the "RST" (Reset) link on the rear of the Terminal.
   -Release the <NEXT> and <HOME> keys.

2. **Note the current Address setting.** The current Address of the Terminal will be displayed via the Zone 1 to 4 Lamps. The Zone Lamp number that corresponds to the current Address will flash.
3. **Select the new Terminal Address number.**
   -Press the key that corresponds to the required Address (1 to 4) within 10 seconds, then press <ENTER>.
4. **Note the current Door Alarm enable status.**
   After the Terminal Address has been entered as per Step 3, the display will now show the current Door Alarm enable status: 0 = Disabled (Default)
   1 = Enabled
5. **Enable / Disable Door Alarm.**
   If an Enhanced Terminal is required to generate a Door Alarm for Door Forced or Door Held conditions, then "Door Alarm" must be enabled for that Terminal.
   -To Enable or Disable, select the option required (0 or 1) within 10 seconds, then press <ENTER>.
   -When the <ENTER> key is pressed, the Enhanced Terminal will now exit Terminal Configuration Mode.
6. **Initialize the LAN.** If a new Terminal is added to an existing system, once the Terminal is configured and connected to the system LAN, the LAN must be initialized by Removing and Re-applying power to the Control Module. Remember to disconnect the battery also when removing power.
7. **Area Assignment.** Enhanced Terminals must be configured for Single Area Mode (Address 961), and an "Associated Area" must be defined for each Terminal (Addresses 952 to 955).
8. **Door Un-lock time.** The system has a default Door Un-lock time of 5 seconds. If a different time is required, this value can be edited at Address 872.

Expansion Card. 995503 / 995504

The Expansion Card connects directly to the Control Module Expansion Port and is available in 2 Versions:
995503. Zone Expansion Card.
Provides 8 additional Zone Inputs and additional Detector power connections.

995504. Zone & Auxiliary Expansion Card.
Incorporates all Zone Expansion card features along with 8 additional low power open-collector Auxiliary Outputs and 4 additional +12V Auxiliary power outputs.

Expansion Card Parts List

- Zone/Auxiliary Expansion Card.
- Installation Manual. (This document)
- Installation Kit containing:
  - 3 x 20mm Brass PCB standoff.
  - 1 x 20mm Threaded plastic PCB standoff.
  - 1 x Pan Head M3x6mm screw.
  - 2 x 6 Way plug-on screw terminals.
  - 4 x 2 Way plug-on screw terminals.
  - 10 x 3k3 End-of-line resistors. 8 x Zone Inputs, 2 x Spare. (orange-orange-black-brown-brown)
  - 10 x 6k8 End-of-line resistors. 8 x Zone Inputs, 2 x Spare. (blue-grey-black-brown-brown)

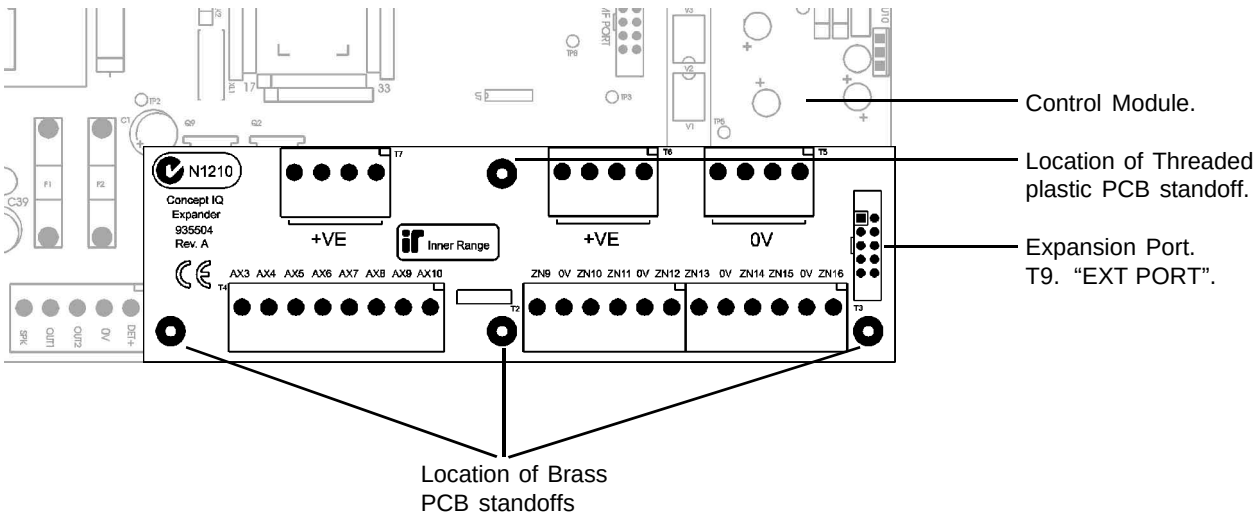
INSTALLATION.

- Remove all power to the Control Module. Remember to disconnect the Battery. ***See Note 1 below.***
- Remove the 3 screws along the bottom edge of the Control Module PCB. (The screws adjacent to T4, T6 & T2)
- Fit the 3 Brass PCB standoffs in place of these 3 screws.
- Fit the Threaded plastic PCB standoff into the mounting hole on the Control Module PCB next to T8 (AUX LAN).
- Plug the Expander Card onto the box header T9 on the Control Module ("EXT PORT").
- Secure the Expander Card to the 4 standoffs using the 3 screws removed from the Control Module and the additional screw provided in the Installation kit.
- Connect the additional Zone Inputs and/or Auxiliary Outputs required.
- Reconnect the power and the Battery to the Control Module, then program the required Zones and Auxiliaries.

NOTES: **1) CAUTION: Shorting any of the pins on the Expansion Port connector whilst powered up, can result in permanent damage to the Control Module and/or the Expansion Card.**

2) Zone Doubling CANNOT BE USED on the system when an Expander Card is fitted.

See next page for Zone Input & Auxiliary Output wiring.


Control Module.
Location of Threaded plastic PCB standoff.
Expansion Port. T9. "EXT PORT".
Location of Brass PCB standoffs
N1210
Concept IQ Expander 935504 Rev. A
Inner Range
+VE
+VE
0V
AX3 AX4 AX5 AX6 AX7 AX8 AX9 AX10
ZN9 0V ZN10 ZN11 0V ZN12 ZN13 0V ZN14 ZN15 0V ZN16
SPK OUT1 OUT2 0V DET+

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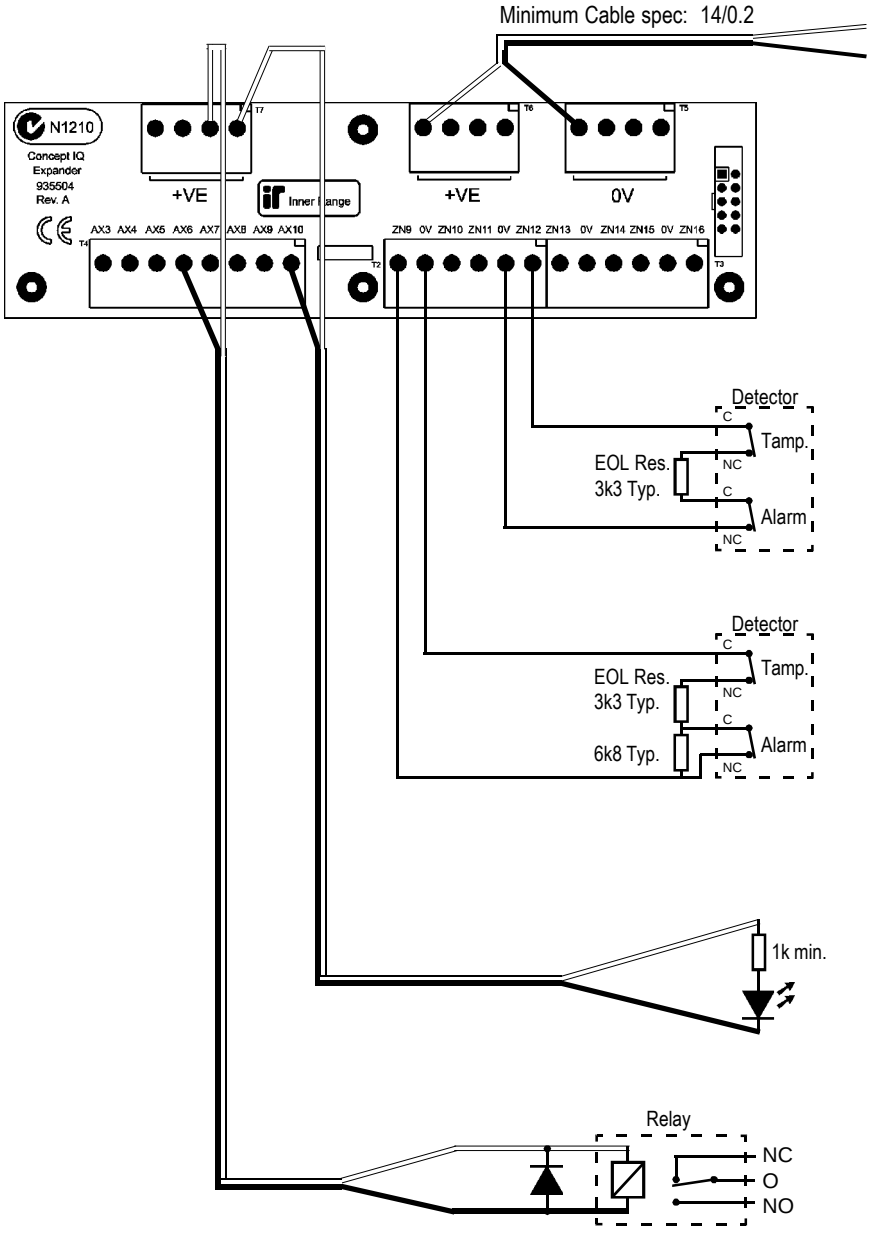
EXPANDER CARD WIRING DIAGRAMS.



T5 & T6. "+VE" and "0V".
Detector Power connections.
12V Supply for Detectors.
Total combined current sourced from "DET+" and "LAN+" on the Control Module, and "+ve" on the Expander Card must not exceed 600 milliAmps.

T2 and T3. Zone Input connections.

Single End-of-Line.

Dual End-of-Line.

T4. Auxiliary Output connections.
995504 Only.

LED wiring.
(Note. Dropping Resistor can be any value in the range of 1k to around 1k5.
e.g. 2 x 3k3 Resistors in parallel)

Relay wiring.
Relay coil voltage: 12V DC
Fit reverse diode across coil.
e.g. 1N4001 - 1N4004.

NOTE: ZONE INPUT CONNECTIONS. "NORMALLY OPEN" ALARM CONTACTS.

Normally Open Alarm Contacts (e.g. As often found on Smoke Detectors) are wired in the same manner as Normally Closed contacts. When programming the Zone Input, Option 8 ("Normally Open") in the "Zone Options" must be selected. (Addresses 752 [Zone 1] to 767 [Zone 16])

IMPORTANT NOTE. AUXILIARY POWER:

Total combined current sourced from "DET+" and "LAN+" on the Control Module, and "+ve" on the Expander Card must not exceed 600 milliAmps.

If additional current is required, a separate, external Power Supply and backup battery must be used to provide power to the required Auxiliary devices and/or Detectors.
e.g. 994051 2A Power Supply.
994055 Short-form Power Supply Board + 560001 Plug pack (For 1A PS), or 560004 In-line transformer (For 2A PS)

When a separate Power Supply is used:
1) The Power Supply must be installed close to the Control Module, and the 0V (or "-VE") supply connections of the Power Supply and the Control Module must be connected together using a heavy guage wire. (14/0.20 minimum)
2) The "+ve" supply connections of any system Module ("DET+", "LAN+" or "+VE") must not be connected to +ve of the separate Power Supply.

DTMF Card. 995505

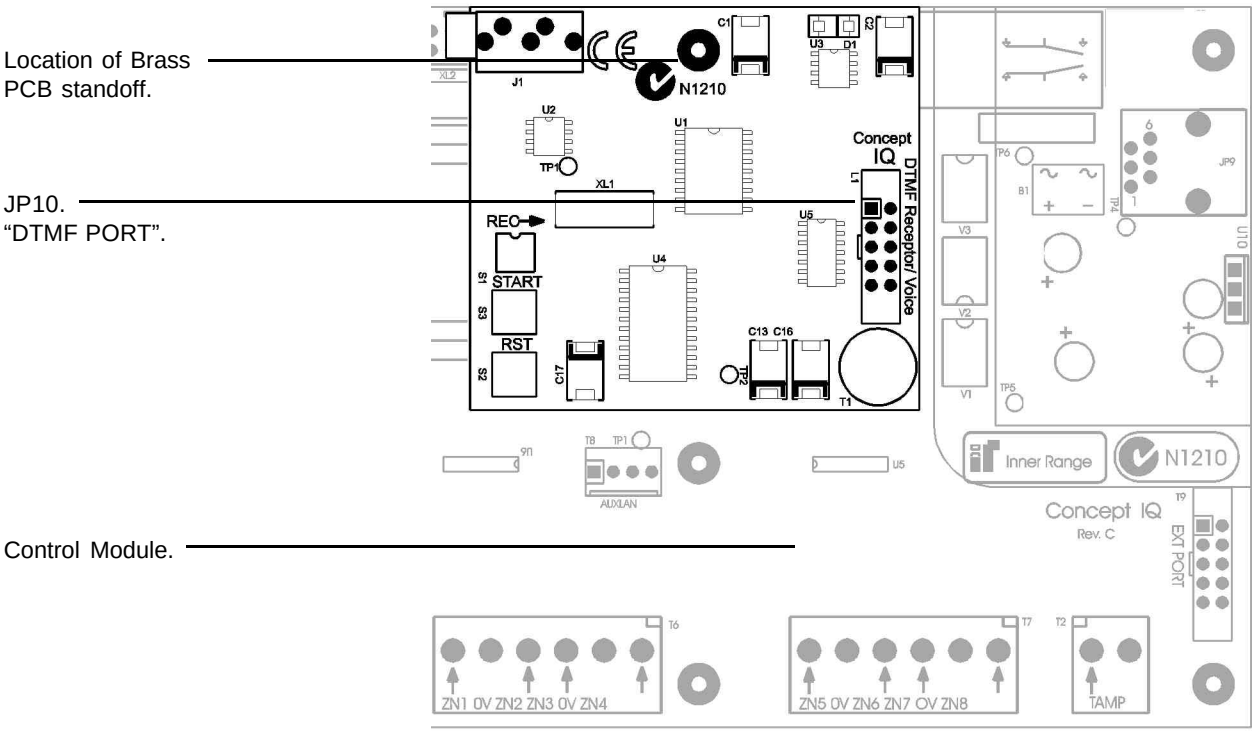
The DTMF Card connects directly to the Control Module DTMF Port to provide Telephone remote control.

DTMF Card Parts List

- DTMF Card.
- Installation Manual. (This document)
- 1 x 20mm Brass PCB standoff.

INSTALLATION.

- Remove the screw on the top edge of the Control Module PCB next to the STATUS Lamp.
- Fit the Brass PCB standoff in place of the screw.
- Plug the DTMF Card onto the box header JP10 on the Control Module (“DTMF PORT”).
- Secure the DTMF Card to the standoff using the screw removed from the Control Module.
- Program the required DTMF functions. *See Installation & Programming Manual, Section 10: Communications.*



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CONCEPT IQ

SECTION 2.
INTRODUCTION TO PROGRAMMING.

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1. Introduction

1.1 SYSTEM OVERVIEW

The Concept IQ is an affordable, simple to use security system targeted at the domestic and small commercial markets. The system has been designed for ease of use by the Installer and the End User.

System Hardware

The basic Control Module has the following hardware dimensions:

- Zones: 8 standard Zone Inputs or 16 doubled Zone Inputs.
- Auxiliaries: Total of 3. 1 Siren speaker / 1 Strobe / 1 General purpose.
- Serial Communications Port: RS232.
- External Device Bus.
- System LAN: Provides connectivity for up to 4 LAN Devices.
- IO Expansion Bus.
- Separate Tamper Input.

A variety of Peripheral devices can be connected directly to the Control Module:

- Programming Key.
- Plug-on Expansion Card options. 8 additional Auxiliary outputs and/or 8 additional Zone Inputs.
- DTMF communications Card.
- DTMF + Voice communications Card.
- Serial Adapter Cable for connection to PC.

The System LAN supports the following LAN Modules:

- Standard 16 Zone / 4 Area LED Terminal.
- Enhanced 16 Zone / 4 Area LED Terminal incorporating Input for a Wiegand Reader and Input/Output facilities for access control functions.
- RF Terminal that adds 2 key or 4 key radio remote functionality.

Functional Description

Zone Inputs. Zone Inputs are individually programmed to define how they are to be processed. An appropriate "Zone Type" is chosen and additional options relating to; Alarm Processing, Reporting, Siren, Pulse counting, Testing, and type of Input Device can also be defined.
Global Zone options also allow system-wide parameters to be set for Pulse Counting, End-Of-Line Resistor values and Zone Self Testing.

System Inputs. 20 System Inputs are also available for monitoring Faults and System Alarms such as; Power Problems, Cabinet & Siren Tampers, Communication Problems, LAN & Battery Fuses, Zone Self-test Status, Keypad Emergency Alarms (Panic, Fire, Medical & Duress) and Access Control violations. The Installer enables the Siren and Reporting options for each System Input required. Automatic Battery Testing is available and triggers the Low Battery alarm if the test fails.

Areas. The system can be configured in Single Area or Multi Area Mode according to the site requirements. Up to 4 Areas are available and Zone Inputs can be assigned to one or more Areas. Each Area can be armed in "AWAY" or "HOME" modes.
Each LED Terminal can be configured for Multi-Area mode or assigned to a Single Area.

Siren. The Siren Speaker output supports a standard 8 Ohm Horn speaker and can generate 4 different siren tones for Burglary, Fire, Medical & Panic alarms. The Siren time is programmable and any System Input Alarms that are programmed to activate the Siren are differentiated from Zone Input Alarms by a choice of 3 Siren tone-burst options.

Auxiliaries. Auxiliary outputs are extremely flexible thanks to a range of versatile programming options for Security, Access control and Building/Home automation. A choice of over 50 "Auxiliary Types" provides for Auxiliaries to; Annunciate different types of alarms, Indicate (mimic) individual Area or Zone status, Indicate Entry, Exit, Auto-Arm & Zone Bypass conditions, Follow TimeZones, etc.
For each individual Auxiliary the output logic and On/Off actions can be tailored including an optional timer that can be programmed in Minutes or Seconds.

Communications. The system offers "Contact ID" or "Domestic" dialing options. For a higher level of Dialer integrity a Secondary telephone number can be programmed, Telephone line monitoring is provided and the maximum number of dial attempts can be specified. A "Comms Fail" alarm is activated if the line is

tampered or the maximum attempts is reached. Daily, Weekly or Monthly Test reports can also be sent at a specified time of day, or triggered manually by a Master User.

The Installer can dial in to the system from a PC for Upload/Download when required. Security is provided by a PIN code requirement, and Callback and Fax Bypass options are available.
With the DTMF Card fitted, a User can dial in to the system, and using their PIN code, can perform remote operations and obtain system status information.

On-board Serial Port is provided allowing connection of a Programming Key or PC for Upload / Download.

Timers. An extensive range of Timers are provided catering for; Individual Area Exit/Entry delays, System Siren time, Keypad lockout time and AC fail delay time. Four TimeZones are provided including provision for up to 10 Holiday dates and automatic Daylight Saving adjustment is also catered for. The TimeZones can be used to turn Auxiliaries On and/or Off and to control Areas.

User Functions. In addition to the User operations described in "Types of Users" below, the system provides a number of options to simplify and/or enhance the User operations and feedback.
These include; Auto-Isolate on Arming, Quick Arming, Key-switch Arm/Disarm and Zone activity display on LED Terminals.

1.2 TYPES OF USERS

The system has 3 special Users and 45 normal Users. The system can be configured for 4 digit or 6 digit PIN codes depending on the requirements of the site. The normal Users can each be assigned a "User Type" and their "User Areas" to define the items that they can control and the operations that they can perform.

Installer - User 1:
The Installer can perform all Installer operations, and all Master operations except for User programming and Arming/Disarming. The Installer can only change their own PIN code. (Via Address 96. *See Section 11: Users*)

Master User - User 2:
The Master User can perform all the Master operations and has access to all Areas.

The Master operations include; Edit Users, View history, Walk test Zones, Set Real-time clock, Siren/Strobe/ Auxiliary Testing, Fault Analysis, View Software Version, Test Battery and Door Bell Enable/Disable.

The Master User can also perform all User operations. (This includes Arming / Dis-arming the system, Isolating zones and Acknowledging alarms.)
The Master User automatically has permission to control all the Areas, Zones and Auxiliary outputs in the system. These permissions cannot be changed for User 2.

Normal Users - User 3 to User 47:
Normal Users can perform a variety of operations such as Arming / Dis-arming , Isolating zones and Acknowledging alarms with various levels of functionality as defined by the User's "User Type".

Any normal User can also be programmed as a Master User if required. In a Multi-Area system, a normal User programmed as a Master User can only add a new User or edit existing Users who can access a subset of their own Area list.

NOTE: DURESS CODES. A User PIN's last digit + 1 will form a DURESS Code. e.g. If a user's PIN is 1234, then 1235 will trigger a duress alarm, and if the user's PIN is 1239, then 1230 will be a duress code.

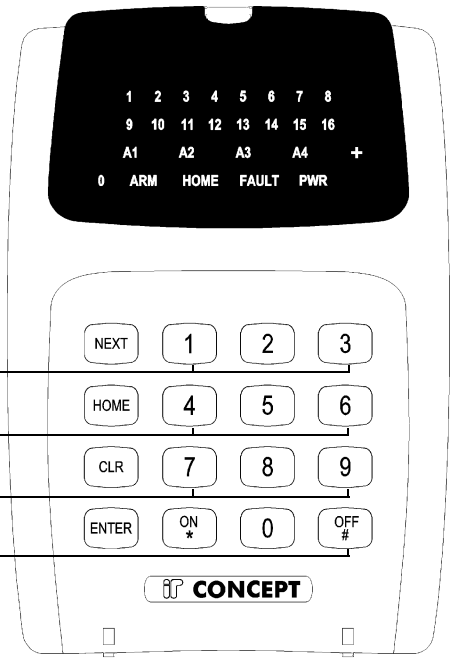
1.3 DEFAULT USERS:

User Number	Description	Factory Default PIN code
User 1	Installer	2345 (or 234567)
User 2	Master User	0123 (or 012345)
User 3 to User 47	General Users (Can be programmed as a Master User)	None
User 48	Reserved for system functions (e.g. Reporting Auto-arming etc.)	Not applicable

The Default Installer PIN and Master PIN Codes should be changed as soon as possible after installation.
When choosing a new PIN Code, ensure that a PIN is chosen that will not be forgotten, while still providing security against unauthorised access.

2. The LED Terminal

2.1 KEY FUNCTIONS.



PANIC. Keys 1 & 3 pressed simultaneously.

FIRE. Keys 4 & 6 pressed simultaneously.

MEDICAL. Keys 7 & 9 pressed simultaneously.

REX (Request to Exit) <OFF> key.
Enhanced Terminals only.

NEXT Installer:
-Select an Installer Mode. After entering the Installer PIN code, press <NEXT> then the Mode number.
-Used to view data values above a value of 16. Press <NEXT> to step through the digits.
Master User:
-Select a Master User operation. After entering the PIN code, press <NEXT> then the Mode number.

HOME -In Single Area Mode: Used to Arm the system in Home Mode.
-In Multi-Area Mode: Used to Arm the specified Area in Home Mode.
Master User:
-Used to step through programming Addresses when programming Users or Telephone numbers.
-Used to toggle between Zone Test modes.

CLR -Set the data in the current Address to the Factory Default. (Press <*>, <CLR>, <ENTER>)
-Clear the data already entered if you have made a mistake.
-Logoff the Terminal. (Exit the current Mode of operation)

ENTER -Selects the specified programming Address. (After the PIN Code and the Address number have been entered)
-Saves the data entered in a programming Address.

AUTO-LOGOFF: The Terminal will automatically logoff the operator if there is no keypad activity detected for 30 seconds. This is to protect the system against unauthorised operator activity.

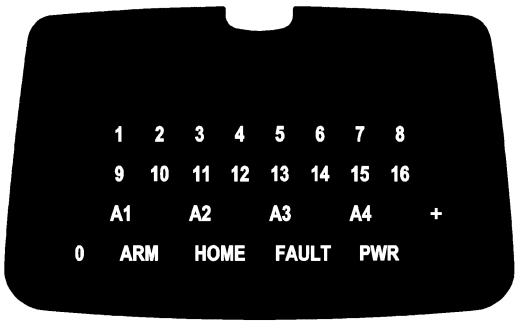
2.2 BEEPER INDICATIONS.

2 or 3 Short Beeps:	A User, Master or Installer function was successful.
1 Long Beep:	A User, Master or Installer function has been unsuccessful. When a wrong key is pressed, or an incorrect value/option is selected, the beeper tones will sound at a lower pitch until a correct operation is successfully performed.
Continuous Short Beeps*:	Entry Delay Timer, Exit Delay Timer or Auto-arm Warning.

***NOTE:**

Single Area systems.	All Terminals will beep in response to Exit delay, Entry delay or Auto-arm warnings.
Multi-Area systems.	Only Terminals associated with a particular Area will beep in response to that Area's warning functions. IMPORTANT NOTE: Terminals not associated with an Area will only beep on Area 1 warning functions.

2.3 LAMP INDICATIONS.



Lamp	ON	OFF	FLASHING
ZONE Lamps 1 to 16	When the Zone is Un-sealed. (If the "Zone activity" option enabled)	When the Zone is Sealed.	FAST: * When there has been an Alarm / Tamper on the Zone. SLOW: * When the Zone has been Isolated.
AREA Lamps A1, A2, A3, A4	Area is Armed. (Multi-Area mode only)	Area is Dis-armed.	There has been an Alarm in the Area. (Multi-Area mode only)
ARM	Area/s are armed in normal mode.	System not armed in normal mode.	-
HOME	Area/s are armed in home mode.	System not armed in home mode.	-
FAULT §	A system input is currently in alarm *	No system inputs are in alarm.	FAST: * A system input has been in alarm and must be acknowledged. SLOW: * When a System Input has been Isolated.
PWR	AC mains OK	AC mains problem.	-
ARM & HOME	**-**	-	System is in "Isolate" mode. (NEXT, 10)
FAULT & PWR	-	-	System is in "Master Operations" mode. i.e. NEXT functions.
0	Used to display values in programming mode.		

NOTES: * Alarm indication takes priority over Isolate indication.
§ See "System Input Mapping and Functional Description" in Section 7.

2.4 DATA VALUE INDICATION VIA TERMINAL LAMPS.

Single digit numbers.
These are numbers between 0 and 16 and are displayed by the “0” Lamp and the Zone Lamps “1” to “16” on the LED Terminal.

Multi digit numbers.
These are all other numbers ranging from 17 to 255.
These numbers are displayed one digit at a time by a sequence of flashing Lamps on the LED Terminal.
The “0” Lamp and the Zone Lamps “1” to “9” are used to display each digit in turn.
The [NEXT] key is used step through the digits. A short beep will sound each time the [NEXT] key is pressed to display the next digit.
When the last digit in the sequence is displayed and the [NEXT] key is pressed again, a long beep will sound to indicate that there are no more digits to display and the first digit will again be displayed.

3. Installer Modes

3.1 OVERVIEW.

In order to Program the system and perform other Installer operations, the Installer must access the appropriate Installer Mode. There are 5 Installer Modes available.

Installer Modes and Mode Indication.

Mode	Mode Name	LED Terminal Indication
01	Programming Mode	<HOME>, <FAULT> and <PWR> Lamps flashing
02	Default the Control Module.	<HOME>, <FAULT> and <PWR> Lamps flashing
03	Import system programming from Programming Key.	3 beeps when complete. Long beep if unsuccessful. (Lamp on Prog. key flashes slowly during transfer)
04	Export system programming to Programming Key.	3 beeps when complete. Long beep if unsuccessful. (Lamp on Prog. key flashes quickly during transfer)
05	Terminal Programming.	<HOME>, <FAULT> and <PWR> Lamps flashing

3.2 ACCESSING THE INSTALLER MODES.

The Default Installer Code is 2345.
This Code should be changed as soon as possible after installation.
When choosing a new Installer Code, ensure that a PIN code is chosen that will not be forgotten, while still providing security against unauthorised access.

Installer Operations require the Installer to Access a number of different Modes.
This is done by entering a valid Installer PIN code, then pressing the <NEXT> key before selecting the 2-digit Mode number. e.g.
Enter PIN; [n] [n] [n] [n]... , then [NEXT] , then the Mode number; [n] , [n]

This key sequence must be used to access all the Operational Modes described in this section.
Remember that the <NEXT> “n”, “n” sequence must be preceded by the Installer PIN code.

e.g. To Enter Programming Mode:
Enter PIN; [n] [n] [n] [n]... , then [NEXT] , then the Mode number; [0] , [1]

NOTE: Upon entering Programming mode the first digit of the Primary Telephone Number at Address 16 will be displayed.

The following pages provide full descriptions of each of the Installer Modes.

3.3 MODE "01". PROGRAMMING MODE.

This mode allows the Installer to program all of the system data and options.

To Select Programming Mode:
Enter PIN; [n] [n] [n] [n]... , then [NEXT] , then the Mode number; [0] , [1] .

See "Basic Programming Techniques" and "Types of Data" for more details of Programming Mode.

3.4 MODE "02". DEFAULTING THE CONTROL MODULE.

Defaulting the Control Module allows the Installer to clear any current system programming from the Control Module and select a factory default database to simplify the programming task.

The Default Database options can be divided into 3 main options:

Option 0: The Control Module memory is completely cleared with the exception of the Installer and Master User Codes.

Options 1 to 16: The Control Module memory is defaulted to the Factory settings shown in the table on the following page AND the number of Zones specified by the Option selected, are programmed into Area 1.

Option 49: The Master Code is defaulted to the Factory setting and all other programming is left intact.

CAUTION: Defaulting the Control Module will erase all current programming stored in the memory before implementing any Factory default settings. (With the exception of Default Option 49)

Select the Defaulting Mode:
Enter PIN; [n] [n] [n] [n]... , then [NEXT] , then the Mode number; [0] , [2]

The <HOME>, <FAULT> and <PWR> Lamps on the LED Terminal will flash simultaneously.

Select the Default Option
Press [ON *] , then the Default Option [n] [n] (1 or 2 digits), then [ENTER]

DEFAULT OPTIONS:

0: Database is completely cleared except for Installer & Master Codes.
1: Database is defaulted to Factory Default settings AND 1 Zone is programmed into the system.
2: Database is defaulted to Factory Default settings AND 2 Zones are programmed into the system.
3 to 15: Database is defaulted to Factory Default settings AND the specified number of Zones are programmed into the system. i.e. 3 Zones to 15 Zones.
16: Database is defaulted to Factory Default settings AND 16 Zones are programmed into the system.
49: Master Code Default. Only the Master code is reset to the factory default. All other programming remains unchanged.

NOTES:
1) The product is dispatched from the factory Defaulted with Option 8 (Factory Default settings and 8 Zones)
2) In Default Options 1 to 16, the Zones programmed into the system are assigned to Area 1.
3) If Default options 9 to 16 are used, and Zones 9 to 16 are added using Zone Doubling (i.e. Not via an Expander card), the "End-of-Line Resistor value" (Address 786) must be set to Type 14 - Zone Doubling.

Exit from Defaulting Mode
Press [CLR] to exit.

Reset the Control Module:
Disconnect the AC Input and the Battery from the Control Module, then re-connect.

HARDWARE DEFAULT PROCEDURE.

The system can also be set to the Factory Default settings (Same as Default Option 8) via a hardware procedure.

- Disconnect the battery and remove power from the Control Module.
- Place a short circuit across Pins 2 & 3 of JP8 on the Control Module.
- Re-apply power to the Control Module and reconnect the battery.
- Remove the short circuit on JP8.

3.5 FACTORY DEFAULT DATABASE SETTINGS.

ADDRESS	FUNCTION	SETTING
16 and 32	Primary & Secondary Telephone Nos	No numbers programmed
48	Reporting Format	0. None
49	Dialer options	No options selected
50	Maximum attempts	10
51 to 53	Test Report Times	No settings
54	Remote connect options	0. No Remote Connect
64	Callback Telephone Number	No number programmed
80	Rings to Answer	16
81	Answering machine bypass	0. Disabled
82	Port 0 Comms Tasks	0. None
83	Port 0 Baud Rate	3. 9600
736	Zone Type. Zone 1	1. Delayed. (If Default Options 1 to 16 are selected)
737	Zone Type. Zone 2	2. Handover. (If Default Options 2 to 16 are selected)
738 to 751	Zone Type. Zone 3 to 16 as selected.	0. Instant. (If Default Options 3 to 16 are selected)
752 to 767	Zone Options	No options selected.
768 to 783	Zone Area	The number of Zones selected in the Default option are assigned to Area 1.
784 & 785	Max Pulse count & Pulse Time	0.
786	End-of-Line Resistor Type	3. Single End-of-line. 3k3
787	Self Test Period	0.
788	Siren Time	5 Minutes
789	Keypad Lockout Time	60 Seconds.
790 to 794	TimeZone 1	9:00 to 17:00. Monday to Friday
795 to 799	TimeZone 2	9:00 to 13:00. Saturday and Sunday
800 to 804	TimeZone 3	7:00 to 20:00. All days including Holidays. (Daytime)
805 to 809	TimeZone 4	20:00 to 7:00. All days including Holidays. (Night-time)
810	AC Report Delay Time	0
816	Auxiliary 1 Event Type	1. Burglary Alarm
817 to 825	Auxiliary 2 to 10 Event Type	0. None
832 to 841	Auxiliary 1 to 10 Time	0
848	Auxiliary 1 Response	2 & 3 Selected. On/Off when Event goes Valid/Invalid (Strobe Output)
849 to 857	Auxiliary 2 to10 Response	2 & 3 Selected. On/Off when Event goes Valid/Invalid
864	Spare	
865 to 867	System Input Programming	No settings programmed
868	General Options	Options 4 & 8 selected. AC Mains sync & Zone activity display on Terminals
869	Emergency Options	No options selected
870 & 871	Auto-Arm Timers	0.
872	Door Unlock Time	5 Seconds.
896 to 908	Area Client Codes	No codes programmed
928 to 931	Area 1 to 4 Entry Delay Time	Area 1: 30 Seconds. Area 2 to 4: 0 Seconds
936 to 939	Area 1 to 4 Exit Delay Time	Area 1: 60 Seconds. Area 2 to 4: 0 Seconds
944 to 947	Area Arming Options	No options selected
952 to 955	Terminal Associated Area	No settings programmed
960	Multi Area Options	No options programmed
961	Terminal Area Mode	No options programmed
962	Spare	
966 to 985	Holidays	No Holiday dates programmed
986 & 989	Daylight Saving Start Month & End Month	0. Automatic Daylight Saving adjustment Disabled
987 & 990	Daylight Saving Start Week & End Week	5. Last Week of the Month
988 & 991	Daylight Saving Start Day & End Day	1. Sunday

3.6 MODE "03". IMPORT DATA FROM THE PROGRAMMING KEY.

The Programming Key.

The Concept IQ Programming Key is a portable non-volatile memory device housed in a convenient "key tag".

The Programming Key allows system programming to be uploaded from the Control Module or downloaded to the Control Module by simply inserting the Programming Key into Serial Port 0 and performing a simple key sequence on the LED Terminal.

A built-in Lamp on the Programming Key visually indicates when data transmission is active.

Importing Data from the Programming Key.

This Mode allows the Installer to copy the programming contents of the Programming Key into the Control Module.
IMPORTANT NOTE: The new data will override the existing contents of the Control Module memory.

Connect the Programming Key to Serial Port 0 on the Control Module.

Select the Import Data Mode:
Enter PIN; [n] [n] [n] [n]... , then [NEXT] , then the Mode number; [0] , [3] .

The Lamp on the Programming Key will flash slowly to indicate data is being copied.
The Terminal beeper will sound 3 short beeps if the operation was successful, or 1 long beep if unsuccessful.

3.7 MODE "04". EXPORT DATA TO THE PROGRAMMING KEY.

This Mode allows the Installer to copy the programming contents of the Control Module into the Programming Key.
IMPORTANT NOTE: The Control Module data will override the existing contents of the Programming Key.

Connect the Programming Key to Serial Port 0 on the Control Module.

Select the Export Data Mode:
Enter PIN; [n] [n] [n] [n]... , then [NEXT] , then the Mode number; [0] , [4] .

The Lamp on the Programming Key will flash quickly to indicate data is being copied.
The Terminal beeper will sound 3 short beeps if the operation was successful, or 1 long beep if unsuccessful.

3.8 MODE "05". TERMINAL AREA PROGRAMMING.

Terminal Programming allows the Installer to define which Area is to be associated with the LED Terminal.
NOTE: This Mode is only available if the Terminal is programmed for Multi-Area mode. (Address 960. Option 1 must be Selected)

Select the Terminal Programming Mode:
Enter PIN; [n] [n] [n] [n]... , then [NEXT] , then the Mode number; [0] , [5]

Select the Terminal Area Mode: (Not relevant to Enhanced Terminals which cannot be set to Multi-Area)
Press [ON *] to Set the current Terminal to Single Area Mode.
Press [OFF #] to Set the current Terminal to Multi Area Mode.

Note that this operation will Edit the relevant option in Address 961, Terminal Area Mode.
When Single Area Mode is selected, the default "Associated Area" is Area 1 (General Area)

Select the Associated Area: (Single Area Mode must be selected in the previous step)
To select the Associated Area for the current Terminal, press the number [n] (1 to 4) of the Area.
The Area selected will be displayed on the Area Lamps.
A long beep will sound if the terminal is not in Single Area Mode or the wrong key is pressed.

Note that this operation will Edit the data in the relevant Addresses 952 to 955, Terminal 1 to 4 Associated Area.

Press [CLR] to exit Terminal Programming Mode.

4. Programming Techniques

4.1 THE SYSTEM DATABASE.

The system programming is stored in Memory Addresses numbered 16 - 988.
Programming the system involves three steps:

1) Enter Programming Mode.

Then for each item of Data to be programmed;
2) Select the Memory Address to be programmed.
3) Program the new Data Value or Options for that Address.

4.2 SELECTING AND PROGRAMMING THE DATA.

To Select the Data to be Viewed or Edited.

When in programming mode, the Memory Address to be viewed or edited can be selected by the following key sequence:

Press [OFF #], then the Address ['n'] ['n'] ... (2 or 3 digits - 16 to 988), then [ENTER]

Pressing [OFF #] [OFF #] will take you to the next Address.
(This does not apply to Data programmed in sequential Addresses such as PIN codes, Telephone Numbers and Client codes)

The programming details of each Data Address in the following sections of this manual will only show the actual Address number (nn...). Remember that the Installer must first access Programming Mode; and the Data Address Number must be preceded by the <OFF / #> key.

To Edit the Data.

The Data Value at this Address will then be displayed on the Terminal, and can be changed by the following key sequence:

Press [ON *] , then the new Data Value or Option setting ['n'] ['n'] ... (1 to 16 digits*), then [ENTER]
* Depending on the type of Data required.

To set the Data in the current Address to the Factory Default setting:
Press [ON *] , then [CLR] , then [ENTER]

If you make a mistake while entering a value, press [CLR] and enter that value again followed by the [ENTER] key.

Exiting the Installer Operations.

Press [CLR] to exit any of the Installer Operations.

4.3 EXAMPLE OF PROGRAMMING.

This example shows how Zone 1 would be changed to the “Hand-over” Input Type.

Zone 1 Input Type is stored in Address 736.

STEP 1. Enter programming mode.

Enter Installer PIN code; [n] [n] [n] [n]... , then [NEXT] , then the Programming Mode number; [0] , [1]

STEP 2. Enter the Address to be changed.

Press [OFF #], then the Address [7] [3] [6] , then [ENTER]

STEP 3. Enter the new Data Value.

Press [ON *] , then the new Data Value [2], then [ENTER]

(0 = Instant, 1 = Delayed, 2 = Handover, 3 = 24Hr Burglary, etc.)

STEP 4. Repeat Steps 2 and 3 to perform any additional programming required.

Press [OFF #] [OFF #] , to advance to the next Address. (i.e. Address 737 in this example)
OR
Press [OFF #] , then the new Address [n] [n] [n]... , then [ENTER]

Enter the new Data Value as before.

STEP 5. Exit the programming mode.

Press [CLR]

5. Types of Data

5.1 OVERVIEW.

When in Programming Mode there are two types of data that are stored in the Programming Addresses.
The type of Data stored in each Address will depend on the type of parameter being defined.

1) "Value" data. A Numerical Data Value that:
- Selects an Option when there are more than 2 alternatives to select from. e.g. Reporting Format or User Type.
- Defines a Value or Quantity for a specific parameter. e.g. Entry and Exit Delay times or Number of Dial attempts.
- Defines a Sequence of numbers for a specific parameter. e.g. PIN codes, Client codes and Telephone numbers.

2) "Option" data. Data field that allows the Installer to select between two alternatives (Select/De-select, Enable/ Disable, Assign/Un-assign, etc.) for up to 8 Options or Items that relate to a particular feature.
(Similar to the Y / n options screens in Concept 3000 / Access 4000.)
e.g. Setting Dialer options, Assigning Areas to a User, Defining options for Individual Zone Inputs, etc.

5.2 "VALUE" DATA.

The range of Data values that can be stored in a Value Data Address is from 0 to 255.
Depending on the parameter being set, the range is often a lot smaller. The data can be either a single digit or a multiple-digit number.
e.g. Remote Connect Options: 0 to 2, Zone Type: 0 to 9, Dial Attempts: 1 to 16,
TimeZone Start / End Hour 0 to 23, AC Fail report delay (M) 0 to 60, Area Entry Delay (S): 0 to 255,
etc.

Single digit numbers.
These are numbers between 0 and 16 and are displayed by the "0" Lamp and the Zone Lamps "1" to "16" on the LED Terminal.

Multi digit numbers.
These are all other numbers ranging from 17 to 255.
These numbers are displayed one digit at a time by a sequence of flashing Lamps on the LED Terminal.
The "0" Lamp and the Zone Lamps "1" to "9" are used to display each digit in turn.
The NEXT key is used step through the digits. A short beep will sound each time the NEXT key is pressed to display the next digit.
When the last digit in the sequence is displayed and the NEXT key is pressed again, a long beep will sound to indicate that there are no more digits to display and the first digit will again be displayed.

E.g. If the value at the Address is 120.
When the Address is entered, The "1" Lamp will flash. (The flashing Lamp indicates that this value is a multi-digit number)
When the <NEXT> key is pressed a short beep will sound and the "2" Lamp will now flash.
When the <NEXT> key is pressed again, a short beep will sound and the "0" Lamp will flash.
When the <NEXT> key is pressed again, a long beep will sound indicating there are no more new digits. The first digit ("1" Lamp) will flash.

Sequential numbers.
Sequential numbers are a string of numbers where each digit is programmed into a series of sequential Addresses.
This type of Value Data makes it easier for the Installer to program data such as PIN codes, Telephone Numbers and Client codes.
To select the data, only the Start Address is entered. The Start Address and each subsequent Address only contains a single digit.
Once the Start Address for the data is selected, the Installer can then enter in the entire string of numbers without having to perform any operation to select the subsequent Addresses.

See next page for example.

E.g. To program the data "1 Pause 9 8 7 6 5 4 3 2" as the Primary Telephone Number.

1) Enter Installer PIN code; [n] [n] [n] [n]... , then [NEXT] , then the Programming Mode number; [0] , [1]

2) Press [OFF #], then the Start Address for the Primary Telephone Number [1] [6] , then [ENTER]

3) Press [ON *] , then the new Data string [1] [NEXT] [9] [8] [7] [6] [5] [4] [3] [2], then [ENTER]

4) Select the next Address or Start Address to program, or Exit Programming Mode

(Note: The <Next> key is used to program a "PAUSE").

Sequential Number data is displayed one digit at a time by a sequence of flashing Lamps in the same manner as Multi-digit numbers described above.

5.3 "OPTION" DATA.

Option data is used to allow the Installer to select between two alternatives (Select/De-select, Enable/Disable, Assign/Un-assign, etc.) for up to 8 Options or Items that relate to a particular feature.

Option Data is displayed on the Zone 1 to 8 Lamps on the LED Terminal.
When a Zone Lamp is ON, the option is Selected. (Enabled or Assigned)
When a Zone Lamp is OFF, the option is De-selected. (Disabled or Un-assigned)

Editing option data.

Option Data is programmed by first selecting the Address of the Data to be edited in the normal manner.

Any number of specific options are then Selected or De-selected by the following method:
1) Check the current setting of the option on the Zone Lamps.
2) For each option that needs to be changed, Press [ON *] , then the option number [n] (1 to 8), then [ENTER] .

This procedure toggles the setting of the selected option.
i.e. If the option was De-selected, it will be Selected. If the option was already Selected, it will be De-selected.

To Select ALL available options:	Press [ON *] , then [9] , then [ENTER] .
To De-select ALL available options:	Press [ON *] , then [0] , then [ENTER] .
To set ALL available options to the factory default settings:	Press [ON *] , then [CLR] , then [ENTER] .

Example.

"Dialer Options" are Option Data and are programmed in Address 49. This data sets which types of events will be reported via dialer:
1 Enable Alarms reported via dialer.
2 Enable Restores reported via dialer.
3 Enable Open / Close reported via dialer.
4 Enable Programming Change reported via dialer.
5 Enable Sending Open Report only if an alarm has occurred.

To Enable "Alarms", "Restores" and "Open Report only after alarm", the following procedure would be performed:

1) Enter Installer PIN code; [n] [n] [n] [n]... , then [NEXT] , then the Programming Mode number; [0] , [1]

2) Select the Address for Dialer Options. Press [OFF #], then [4] [9] , then [ENTER]

3) Enable the three options required. (Assuming none of the options are currently enabled)
Press [ON *] , then [1] , then [ENTER]
Press [ON *] , then [2] , then [ENTER]
Press [ON *] , then [5] , then [ENTER]

(Remember that the same key sequence is used to Disable an option that is already Enabled.

4) Check Zone Lamps 1 to 8 to ensure that the required options have been selected successfully.
Zone Lamps 1, 2 and 5 should be ON. All other Zone Lamps should be OFF.

5) Select the next Address or Start Address to program, or Exit Programming Mode.

6. Recommended Programming Sequence

1. **Determine the number of Burglary Alarm Zone Inputs that will be connected to the system.**
   For ease of programming; If Entry/Exit Zones are to be used, it is recommended that:
   -The Zone Input device that will start the Entry Timer is connected to Zone 1.
   -The "Handover" Zone Input device (If required) is connected to Zone 2.
   -Other Burglary Alarm Zone Input devices are connected to the lowest Zone Input numbers.
   -Other types of Zone Input devices are connected to the higher Zone Input numbers.

2. **Logon to the Terminal using the Installer PIN code and select Mode 2 - Defaulting the Control Module.**
   -Enter PIN, <NEXT>, 0, 2.

3. **Select the Default Option that matches the number of Burglary Alarm Zone Inputs required.**
   -<*>, nn, <ENTER>. Where "nn" is the Default option. 0 = No Zones, 1 = 1 Zone, 8 = 8 Zones, etc.
   The Database will be defaulted as per the settings shown in the table on page 8.

4. **IF Multi-Area operation, or Sub-Area Functionality is required, program the Multi-Area options.**
   Address 960

1	Multi-Area Mode	4	Include Area 2 in Area 4 Sub-Area list
2	Enable Area 4 as Sub-Area	5	Include Area 3 in Area 4 Sub-Area list
3	Include Area 1 in Area 4 Sub-Area list.		

5. **Program the Global Zone Options. (IF there are variations required from the Default programming)**
   IF Pulse counting is to be used:
   Program the "Pulse Count" & "Pulse Time". Addresses 784 & 785.

   IF the End-of-Line Resistors are a value <u>other than</u> "3k3 Single End-of-Line":
   Program the "End-of-Line Resistor" Value. Address 786.

   IF Zone Self-Testing is required:
   Program the Zone Self-Test period. Address 787.

6. **Program the Individual Zone Inputs. (IF there are variations required from the Default programming)**
   -Program the Zone Type: Addresses 736 (Zone 1) to 751 (Zone 16)

0	Instant.	5	24 Hour Panic.
1	Delayed.	6	24 Hour Duress.
2	Handover.	7	Door Bell.
3	24 Hour Burglary.	8	Key-switch.
4	24 Hour Fire	9	Key-switch Home mode.

   -Program the Zone Options: Addresses 752 (Zone 1) to 767 (Zone 16)

1	Silent.	5	Self-Test Zone.
2	One-shot Siren.	6	Day Alarm Zone.
3	One-shot Dialer.*	7	Home Zone.
4	Pulse Count.	8	Normally Open.

   * Highly recommended if Domestic Dialer communications format is to be used.

   -Program the Zone Areas: Addresses 768 (Zone 1) to 783 (Zone 16)

1	Zone assigned to Area 1.	5	Zone assigned to Area 3.
2	Zone assigned to Area 2.	6	Zone assigned to Area 4.

7. **Enable any additional General System Options that are required.**
   Address 868

1	Auto-Isolate on Arming.	5	Automatic Battery Testing.
2	Quick Arming.	6	"Latching" Key-switch operation.
3	6 digit PIN codes.	7	Allow Master Users to edit Telephone numbers.
4 *	Clock synchronized to 50Hz AC Mains.	8 *	Display Zone activity when disarmed.

   *Already enabled by default.

8. **Enable any of the Emergency Options that are required.**
   Address 869

1	Panic Alarms activate Siren.	5	Medical Alarms activate Siren.
2	Panic Alarms activate Dialer.	6	Medical Alarms activate Dialer.
3	Fire Alarms activate Siren.	7	Duress Alarms activate Dialer.
4	Fire Alarms activate Dialer.		

9. **IF Area 1 Entry/Exit Delay default values need to be changed, OR**
IF Entry/Exit Delays are required in Areas 2, 3 or 4, program/edit the Area Entry and/or Exit Delay times.
Addresses 928 to 931 Area 1 to 4 Entry Delay. Default = Area 1: 30 Seconds.
Addresses 936 to 939 Area 1 to 4 Exit Delay. Default = Area 1: 60 Seconds.

10. **Enable the System Inputs that are required to activate the Siren.**
Address 865.

1	AC Fail.	5	Comms Fail / System Reset.
2	Low Battery.	6	Siren Monitor.
3	Cabinet Tamper.	7	PWR Fuse / Battery Fuse.
4	Keypad Lockout.		

NOTE: If any of these options are selected, check the "System Input Siren Type" setting. Address 867.
0 = 1 second burst (Default). 1 = 10 second burst. 2 = 1 Sec burst every 60 Secs for 5 Mins.

11. **Enable the System Inputs that are required to activate the Dialer.**
Address 866.

1	AC Fail.	5	Comms Fail / System Reset.
2	Low Battery.	6	Siren Monitor.
3	Cabinet Tamper.	7	PWR Fuse / Battery Fuse.
4	Keypad Lockout.	8	Zone Self-Test Fail.

12. **Program any Timers that may be required.**
Address 788: Siren Time. (Defaulted to 5 Minutes)
Address 789: Keypad lockout time (Defaulted to 60 Seconds)
Address 810: AC Report delay. *CAUTION. Read details in Section 4 - Times before programming.*

13. **IF any Areas or Auxiliaries are to be controlled automatically by a TimeZone, edit the required TimeZone/s.**
Addresses 790 to 809. (All TimeZones have Default settings. Check the details before editing)
See Section 4 -Times for details.

NOTE: If the TimeZones are required to take account of Holidays, program the required Holiday Dates.
Addresses 966 to 985 *See Section 4 -Times for details.*

14. **Program any additional Auxiliary outputs required.**
(NOTE: Auxiliary 1 is already programmed with default settings for controlling a Strobe.
It is set to the "Burglary Alarm" Event Type and has "Auxiliary Response" options 2 & 3 selected)
-Program the Auxiliary Event Type: Addresses 816 (Aux 1) to 825 (Aux 10) *(See Sect 8 [Auxes] for details)*

-Program an Auxiliary Timer if required: Addresses 832 (Aux 1) to 841 (Aux 10)

-Program the Auxiliary Response: Addresses 848 (Aux 1) to 857 (Aux 10)

1	Output is inverted. (Normally Closed)	3	Aux Off when Event goes Invalid.
2	Aux On when Event goes Valid.	4	Aux timer will time in Minutes.

15. **IF the system is programmed for Multi-Area operation (see Step 4), program the Terminals.**
-Program the Terminal Area Mode if any Terminals are required to operate in Single-Area Mode. Address 961.

1	Sets Terminal 1 to Single-Area mode.	3	Sets Terminal 3 to Single-Area mode.
2	Sets Terminal 2 to Single-Area mode.	4	Sets Terminal 4 to Single-Area mode.

IF any Terminals are set to Single Area mode, assign the associated Area.
Addresses 952 (Terminal 1) to 955 (Terminal 4)

1	Assign Area 1. (Default)	3	Assign Area 3.
2	Assign Area 2.	4	Assign Area 4.

16. **IF automatic Daylight Saving adjustment is required, program the start and end dates.**
Addresses 986 to 991. *See Section 4 -Times for details.*

17. **IF a TimeZone is required to Arm an Area, program the Area Arming Options.**
Addresses 944 to 947 Area 1 to 4

0	No TimeZone control	3	TimeZone 3 will control the Area.
1	TimeZone 1 will control the Area.	4	TimeZone 4 will control the Area.
2	TimeZone 2 will control the Area.		

NOTE: If a Pre-arm warning is required, program the "Autoarm Pre-warn time". Address 870.

18. **IF the Re-Autoarm function is required, program a Re-Autoarm time.**
Address 871.

NOTE: If a Pre-arm warning is required, program the "Autoarm Pre-warn time". Address 870.

19. **IF the system has Access Control via one or more Enhanced Terminals, program the Door Times.**
-Program the Door Unlock time. Address 872 (Default is 5 Seconds)

20. **IF the system is to report in Contact ID or Domestic Dialer formats, program the Dialer options.**
-Program the Primary & Secondary Telephone numbers. Addresses 16 and 32.

-Select the Reporting Format. 1 = Contact ID. 2 = Domestic. Address 48.

-Select the required Dialer Options. Address 49.

1	Alarms reported via Dialer.	5	Openings reported only after an alarm.
2	Restores reported via Dialer.	6	Remote control via DTMF Card enabled.*
3	Area Open/Close reported via Dialer.	7	Isolates reported via Dialer.
4	Programming change reported via Dialer.		

* DTMF Card must be fitted to Control Module.

-Edit the maximum dial attempts if required. (Default = 10 attempts) Address 50.

-Program the Client Code/s. Area 1 only if system is programmed for Single Area operation.

Address 896:	Area 1	Address 904:	Area 3
Address 900:	Area 2	Address 908:	Area 4

21. **IF periodic Test Reports are to be sent to the Central Monitoring Station, program the Test Report options.**
-Program the Test Report period. Address 51.

0	No Test Report.	2	Every Monday.
1	Every Day.	3	First day of every Month.

-Program the time of day the Test Report is to be sent. Address 52: Hour. Address 53: Minute.

22. **IF Remote connection for Upload/Download or Telephone is required, program the Remote Connect options.**
-Program the Remote Connect Options. Address 54
0 = No Remote connect. 1 = Remote Connect allowed. 2 = Remote connect with Callback.

-Program the number of rings before answer. Address 80.

-IF Answering machine (Fax machine) bypass is required, program the "Follow-on" time.
Address 81. *(See Section 10 [Communications] for details)*

-IF the "Remote connect with Callback" option was selected, program a "Callback Telephone no". Address 64.

23. **IF the Serial Port on the Control Module is to be used, program the Serial Port options.**
-Select the Communications Task. Address 82. 3 = Upload / Download.

-Select the Baud Rate. (Default is 9600) Address 83 0 = 300. 1 =1200. 2 = 4800. 3 = 9600

24. **Change the Installer PIN code.**
Address 96. This should be done before the system is commissioned and handed over to the client.
Ensure that a new PIN code is chosen that will not be forgotten, while still providing security against unauthorised access.

25. **Program the Users.**
A Master User Code must be used to program the Users. *See the User's Manual for details.*

Section 3. General System options

Address

General Options
868 General Options 1
869 Emergenency Options 2

868 **GENERAL OPTIONS** *Default = Options 4 & 8 Selected*

Data type: Option	Option:	When Selected:
	1	Enables auto-isolate on arming. (Applies to "Delayed" Zone Type only)
	2	Enables Quick arming. (Area number key, then <ON> or <HOME> -No PIN code required)
	3	PIN codes are 6 digits. (PIN codes are normally 4 digits)
	4 *	Enable Real-time clock to be synchronized to the AC Mains frequency. (50Hz).
	5	Enables automatic battery testing.
	6	Configures all "Key switch" Zone Types (Types 8 & 9) for "Latching" (Double-pole) operation. (Key-switch Zones are normally "Momentary" operation)
	7	Enables Master User/s to edit Telephone numbers (Via <NEXT>, 27)
	8 *	Enables display of Zone activity on Terminals when Area/system is disarmed.

* Selected in Defaults.

NOTES:

Auto-Isolate on arming.
Any "Delayed" Zone Inputs (Zone Type 1) in the Area/s being armed, that are in the Alarm state when the Exit Delay timer is about to expire, will automatically be isolated.

Note that any other types of Zones that need to be Isolated when arming the system must be manually Isolated before the arming procedure is commenced. (Via <NEXT> 1, 0.)

If enabled, Auto-Isolate will operate regardless of how the system is armed. (e.g. Via User, Key-switch, One-touch arming, Remote, etc.)

Quick Arming.
Single Area System: Quick Arming procedure is always <1>, <ON> or <1>, <HOME>.
Multi-Area System: Quick Arming procedure is <Area Number>, <ON> or <Area Number>, <HOME>.
If the Terminal is programmed for Single Area Mode, only the associated Area can be Armed.

6 Digit PIN Codes.
If this option is selected:
- The Factory default Installer PIN Code (User 1) becomes 2 3 4 5 6 7
- The Factory default Master PIN Code (User 2) becomes 0 1 2 3 4 5
- All PIN Codes must be 6 digits long.

Automatic battery test.
IMPORTANT NOTE: Enabling Automatic battery test is highly recommended as a Low Battery Alarm can only be generated if the battery falls below 11.2V during a Battery Test, or when the AC input is not present.
When this function is enabled the system will test the battery every 8 hours; At Midnight, 8 AM and 4 PM every day.
This involves disconnecting the AC supply for 4 minutes and measuring the battery voltage under load.
If the battery voltage falls below 11.2V +/-0.3V, a "Low Battery" System Input alarm will be generated.

Key-switch operation.
Momentary: (Default setting) When this function is enabled, the state of the Area will toggle whenever there is a "Seal to Alarm" transition on the Keyswitch Zone. The "Alarm to Seal" transition will be ignored.
Latching: When this function is enabled, the Keyswitch will Arm the Area when it goes "Unsealed" and Disarm the Area when it returns to "Sealed".

Address

869 **EMERGENCY OPTIONS** *Default = No Options Selected*

Data type: Option

These options determine how the PANIC, FIRE, MEDICAL, and DURESS alarms will be processed. These settings will affect:

- Panic alarms generated by Keypad Panic AND Zone Inputs programmed as the “24 Hour Panic” Zone Type. (Zone Type 5)
- Fire alarms generated by Keypad Fire. (Siren and Dialer options for “24Hr Fire Zones are determined by Zone Options programming)
- Medical alarms generated by Keypad Medical.
- Duress alarms generated by Keypad Duress AND Zone Inputs programmed as the “24Hr Duress” Zone Type. (Zone Type 6)

Option:	When Selected:
1	Panic alarms will activate the Siren.
2	Panic alarms will activate the Dialer.
3	Fire alarms will activate the Siren.
4	Fire alarms will activate the Dialer
5	Medical alarms will activate the Siren.
6	Medical alarms will activate the Dialer
7	Duress alarms will activate the Dialer.

When an Emergency Alarm activates the Siren, the Siren will run for the programmed Siren time, OR until the Alarm is acknowledged at a Terminal. (via NEXT 25; Fault Analysis)

Section 4. Time Programming

Address

788	Siren Time	1
789	Keypad Lockout Time	1
	TimeZones	
790	TimeZone 1 Start Hour	2
791	TimeZone 1 Start Minute	2
792	TimeZone 1 End Hour	2
793	TimeZone 1 End Minute	2
794	TimeZone 1 Days Of Week	2
795 to 799	TimeZone 2 (5 Addresses)	2
800 to 804	TimeZone 3 (5 Addresses)	2
805 to 809	TimeZone 4 (5 Addresses)	2
810	AC Report Delay	3
	Holidays	
966 to 984	Holiday Month (10 Addresses)	3
967 to 985	Holiday Day (10 Addresses)	3
	Daylight Saving	
986	Daylight Saving Start Month	3
987	Daylight Saving Start Week	3
988	Daylight Saving Day-of-week in Start Week	3
989	Daylight Saving End Month	4
990	Daylight Saving End Week	4
991	Daylight Saving Day-of-week in End Week	4
NEXT 23	Real-Time Clock	4

Other Timers:

“Area Entry Delay” & “Area Exit Delay” Times.	See Section 5. Areas.
“Autoarm Prewarn” & Re-Autoarm” Times.	See Section 5. Areas.
“Pulse Time” for Pulse Counting feature.	See Section 6. Zones
“Auxiliary Timers”.	See Section 8. Auxiliaries.
“Door Open Time”.	See Section 9. Terminals.

788 **SIREN TIME** *Default = 5 Minutes*

Data type: Value

Range: 0 - 255 Min.

This Address sets the time the siren will sound when an alarm has occurred on a Zone Input.

Note that an alarm on a Zone Input will only activate the Siren when:

- The Zone Type selected is in the range of Type 0 to Type 5. (Address 736 [Zone 1] to 751 [Zone 16])
- The Zone Options must have Option 1 (Silent), Disabled.
- For Zone Types 4 (24Hr Fire) & 5 (24Hr Panic), Siren activation must also be enabled in the “Emergency Options”. (Address 869: Option 1-Panic alarm sounds Siren. Option 3-Fire alarm sounds Siren)
- The Zone Input must have at least one Area assigned.

The Siren Time does not apply to System Inputs. Siren operation for System Inputs is determined by the settings in Address 865 - System Input Siren enable, and Address 867 - System Input Siren Type.

789 **KEYPAD LOCKOUT TIME** *Default = 60 Seconds*

Data type: Value

Range: 0 - 255 Sec.

This sets the time the Terminal keypad will be locked out when five incorrect logins (PIN code attempts) in a row have occurred on a keypad.

For Keypad Lockout to function, the setting must be non-zero.
See Section 7; “System Inputs” if Siren activation (Address 865, Option 4) or Dialer activation (Address 866, Option 4) are required for Keypad Lockout.

Times

Address **TIMEZONES**

TimeZones can be programmed to define a Start time and End time, and the Days of the Week on which the TimeZone will be valid. TimeZone programming also provides a "Holiday" option to be enabled when assigning the Days, to allow the TimeZone to still be valid on any dates defined as Holidays.
Once programmed, TimeZones can be used to arm & disarm Areas &/or control Auxiliary outputs automatically.

Data type: **START AND END TIMES**
Value The Start and End Times are defined in 4 separate Addresses for each TimeZone.

790 **TIMEZONE 1 START HOUR** *Default = 9*

Range:
0 - 23 This Address defines the Hour component of the Start Time.

791 **TIMEZONE 1 START MINUTE** *Default = 0*

Range: This Address defines the Minute component of the Start Time.
0 - 59

792 **TIMEZONE 1 END HOUR** *Default = 17*

Range: This Address defines the Hour component of the End Time.
0 - 23

793 **TIMEZONE 1 END MINUTE** *Default = 0*

Range: This Address defines the Minute component of the End Time.
0 - 59

794 **TIMEZONE 1 DAYS OF THE WEEK** *Default = 2, 3, 4, 5, 6 Selected. (Mon - Fri)*

Data type: Option
Option

Option:		When Selected:
1	Sunday	The TimeZone will be valid on the specified Day, or Days, unless the date has been defined as a Holiday.
2	Monday	
3	Tuesday	
4	Wednesday	
5	Thursday	
6	Friday	
7	Saturday	
8	Holiday	The TimeZone will always be valid on the Days of the Week selected above, regardless of whether the date has been defined as a Holiday.

The default setting is 9:00 – 17:00 on all Weekdays (Working Hours)

795 **TIMEZONE 2 (5 Addresses)**
to
799 *The default setting is 9:00 – 13:00 on Weekend Days (Overtime Hours)*

800 **TIMEZONE 3 (5 Addresses)**
to
804 *The default setting is 7:00 – 20:00 on every Day (Day-time)*

805 **TIMEZONE 4 (5 Addresses)**
to
809 *The default setting is 20:00 – 7:00 on every Day (Night-time)*

Address

810 **AC REPORT DELAY** *Default = 0*

Data type: Value
This location sets the time period the AC will need to be continuously disconnected from the system before an alarm will be reported to the central station. When the AC is removed from the system the keypad AC indicator will immediately indicate the AC has been removed.

Range:
0 - 60 Min.
CAUTION: If an AC Report Delay time is programmed, the system Owner/User must be made aware that if the AC supply fails and the Battery is in poor condition, the system may shut down before the AC fail is reported to the Central Station, leaving the premises unmonitored and/or unprotected.
If an AC Report Delay is required, ensure that Automatic battery testing is enabled (Address 868, Option 5), keep the period as short as possible, and advise the system Owner/User of the implications of the function.

Data type: Value
HOLIDAYS *No Default programming*

966 **HOLIDAY 1 MONTH**

Range:
0 - 12
This Address sets the Month component of the Date for Holiday 1.
A value of 0 means no Date is defined for Holiday 1.

967 **HOLIDAY 1 DAY**

Range:
0 - 31
This Address sets the Day component of the Date for Holiday 1.
A value of 0 means no Date is defined for Holiday 1.

HOLIDAY 2 TO HOLIDAY 10

968	Holiday Number:	1	2	3	4	5	6	7	8	9	10
to	Month Address:	966	968	970	972	974	976	978	980	982	984
985	Day Address:	967	969	971	973	975	977	979	981	983	985

DAYLIGHT SAVING

Data type: Value
IMPORTANT NOTE: The Daylight Saving "Start Month" and "End Month" must both be non-zero before any automatic Daylight Saving adjustment will be performed.
See the information following these programming options for help in determining the Daylight Saving Start and End dates to be programmed.

Note that Daylight Saving adjustment occurs at 00:00 (Midnight) on the specified day.

986 **DAYLIGHT SAVING START MONTH** *Default = 0*

Range:
0 - 12
This Address sets the Month component of the Date for the Start of Daylight Saving.
A value of 0 means no automatic Daylight Saving adjustment.

987 **DAYLIGHT SAVING START WEEK** *Default = 5. Last Week of the Month*

Range:
1 - 5
This Address sets the Week-Of-Month component of the Date for the Start of Daylight Saving.

988 **DAYLIGHT SAVING DAY-OF-WEEK IN START WEEK** *Default = 1. Sunday*

Range:
1 - 7
This Address sets the Day-Of-Week component of the Date for the Start of Daylight Saving.

1	Sunday	4	Wednesday	6	Friday
2	Monday	5	Thursday	7	Saturday
3	Tuesday				

989 **DAYLIGHT SAVING END MONTH** *Default = 0*

This Address sets the Month component of the Date for the End of Daylight Saving.
A value of 0 means no automatic Daylight Saving adjustment.

990 **DAYLIGHT SAVING END WEEK** *Default = 5. Last Week of the Month*

Programmed as per Start Week.

991 **DAYLIGHT SAVING DAY-OF-WEEK IN END WEEK** *Default = 1. Sunday*

Programmed as per Start Day-Of-Week.

DAYLIGHT SAVING TIME (DST) START AND END DATES.

Australia
In NSW, ACT, VIC and SA, DST normally starts on the last Sunday in October, and ends on the last Sunday in March.
e.g. 28 October 2001 to 31 March 2002
27 October 2002 to 30 March 2003
26 October 2003 to 28 March 2004
31 October 2004 to 27 March 2005
In TAS, DST normally starts on the first Sunday in October, and ends on the last Sunday in March.
e.g. 7 October 2001 to 31 March 2002
6 October 2002 to 30 March 2003
5 October 2003 to 28 March 2004
3 October 2004 to 27 March 2005

New Zealand
Daylight Saving Time normally starts on the first Sunday in October, and ends sometime in March.

Europe
Daylight Saving Time normally starts on the last Sunday in March, and ends on the last Sunday in October.
e.g. 25 March 2001 to 28 October 2001

NOTE: These dates are only a guide, and should be checked with a reliable local source.

Comprehensive information on DST Start and End dates for most world locations can be found at:
Time and date.com http://www.timeanddate.com/time/

NEXT 23 **SET THE REAL-TIME CLOCK.**

Press <*>, then enter the current Time and Date as an 11 digit data string, followed by the <ENTER> key. Note that the Real-Time Clock must be re-programmed to the current time and date whenever the Control Module is powered down. i.e. The AC supply and the battery are disconnected.

The data is entered in the following order: mm:hh ; DD:MM:YY ; d
i.e. minute, minute (00 - 59); hour, hour (00 - 23); Day, Day (01 - 31);
Month, Month (01 - 12); Year, Year (00 - 99); day of week (1 Sunday - 7 Saturday)

e.g.

TIME & DATE:	DATA STRING:
1) 07:24 AM, Monday, June 5, 2001	2,4,0,7,0,5,0,6,0,1,2, <ENTER>
2) 05:15 PM, Thursday, September 20, 2001	1,5,1,7,2,0,0,9,0,1,5, <ENTER>

To view the current Time and Date, enter the Real-Time Clock Programming Mode and the first digit of the Time and Date Data will be displayed on the Terminal Zone Lamps.

Press the <NEXT> key to step through the 13 digits in the Time and Date Data. The first 2 digits are the "Seconds". When the end of the data is reached, a long beep will sound to indicate there are no more characters to display, and the first digit will again be displayed.

Section 5. Area Programming

Address		
	Area Modes	1
	Multi Area Systems	1
960	Multi Area Options	1
928 to 931	Area Entry Delay	1
936 to 939	Area Exit Delay	1
944 to 947	Area Arming Options	2
870	Area AutoArm Pre-warn time	2
871	Area Re-AutoArm time	2

AREA MODES

The system is designed to operate in Single Area or Multi-Area mode.

-In Single Area mode the system only uses one area, the “General Area” or “Area 1”.
When Single Area mode is selected, the Area Lamps on the Terminal are not used and any Multi-Area programming or operating functions are ignored.
-When Multi-Area mode is selected, up to four separate Areas can be used. The Area Lamps on the Terminal indicate the status of each individual Area.

MULTI-AREA SYSTEMS

When the system operates in Multi-Area mode, it can be configured as four separate Areas, or as 3 Areas with Area 4 as the Sub-Area.
Sub-Area Mode. When this mode is selected, Area 4 will only be armed when all the Areas included in Area 4’s “Sub-Area list” are armed. When this mode is selected, Area 4 can be Disarmed from a Terminal or Keyswitch, but will not Arm unless all the Areas in the Sub-Area List are Armed.

NOTE: If an Entry/Exit Area is required in a Multi-Area system, Area 1 is recommended.

960 **MULTI-AREA OPTIONS** *Default = No Options Selected*

Data type: Option

If the system is in Single Area mode, none of the Sub-Area options need to be programmed.

Option:	When Selected:
1	Enables Multi-area mode. (Default is Single area mode)
2	Enables Area 4 as the Sub-Area.
3	Includes Area 1 in the Area 4 Sub-Area list.
4	Includes Area 2 in the Area 4 Sub-Area list.
5	Includes Area 3 in the Area 4 Sub-Area list.

928 to **931** **AREA ENTRY DELAY TIME** *Default = Area 1: 30 Seconds*

These Addresses set the Entry time to be applied to Zone Inputs programmed as Delayed Zones. i.e. Zone Types 1 (Delayed) and 2 (Handover).

Data type: Value

Area Number:	1	2	3	4
Entry Delay Time Address:	928	929	930	931

Range: 0 - 255 Sec.

936 to **939** **AREA EXIT DELAY TIME** *Default = Area 1: 60 Seconds*

These Addresses set the Exit time to be applied to Zone Inputs programmed as Delayed Zones. i.e. Zone Types 1 (Delayed) and 2 (Handover).

Data type: Value

Area Number:	1	2	3	4
Exit Delay Time Address:	936	937	938	939

Range: 0 - 255 Sec

Address

944 to **947** **AREA ARMING OPTIONS** *Default = 0 (All Areas)*

The Area Arming options allow a TimeZone to be assigned to the Area causing the Area to automatically Arm when the TimeZone goes Invalid.

Data type: Value

Range: 0 - 4

Note that when the TimeZone goes Invalid and the Area Arms, it does not force the Area to remain in the Armed state for the duration of the Invalid period.
i.e. The control function only occurs on the Valid-to-Invalid transition or "edge".
This means the Area can still be controlled by other entities, if required, such as:
-User control via PIN codes and Keyswitches, etc.
-Automatic control via the Re-Autoarm function.
-Remote Control.

Area Number:	1	2	3	4
Area Arming Options:	944	945	946	947

Value:	When Selected:		
0	No TimeZone control.	3	TimeZone 3 will control the Area.
1	TimeZone 1 will control the Area.	4	TimeZone 4 will control the Area.
2	TimeZone 2 will control the Area.		

NOTES: 1) If a System Reset occurs and the TimeZone is currently Invalid, the Area will Auto-arm.
2) Auto-arm will Force-arm the Area and will only auto-isolate Delayed Zone Types. Any other Zone Types that are un-sealed when the Area arms, will go into alarm.

870 **AUTOARM PRE-WARN TIME** *Default = 0*

Data type: Value

Range: 0 - 255 Sec.

This Address determines the time period that a warning indication will be provided when an Area is about to be automatically armed by a TimeZone, or by the Re-Autoarm function.

A value of 0 means no Pre-warning. Note that the Pre-warn time is added to the Auto-arm time. e.g. If the Area is programmed to arm at 7 PM with a Pre-warn time of 120 Seconds, the Area will arm at 7:02 PM.

The Autoarm Pre-warn indication is provided by Terminals associated with the Area about to be armed, and by the relevant Auxiliary Event Types; 45 (Area 1) to 48 (Area 4).

871 **RE-AUTOARM TIME** *Default = 0*

Data type: Value

Range: 0 - 255 Min.

The Re-Autoarm function allows one or more Areas to be programmed to automatically arm when no activity is detected on the Zone Inputs in the Area for a specified period of time.
This function can be used for a number of purposes including:
-The ability to ensure that Areas are not accidently left dis-armed when all personnel have vacated the site.
-Turning off particular building services (lights, aircon, etc) when no personnel are detected in the Area.
-Keyswitch or Button operated "Deadman" functions.

To implement the Re-Autoarm feature, the following options must be programmed:

1) The Area must be programmed as an Autoarm Area. i.e. A TimeZone must be assigned to the Area in the Area Arming options. (Address 944 [Area 1] to 947 [Area 4])
NOTE: If you do not wish the Area to turn On at the End time specified in the TimeZone, assign a TimeZone that has the Start and End times programmed to 00:00.
2) Program a "Re-Autoarm Time" to a value of 1 to 255 to specify how long the Area can remain dis-armed without detecting any Zone Input activity. (If this period expires without any Zone Input activity being detected, the Area will automatically arm)

Settings:

0 There will be no Re-autoarm function.

1 to 255 a) When an Autoarm Area is disarmed, the Re-Autoarm timer will be started for that Area.
b) While the timer is running, any Zone Input activity detected in the Area will cause the timer to be re-started. (Thereby preventing the Area from Re-arming)
c) When the Re-Autoarm timer has run for the specified time without detecting any Zone Input activity, the Area will automatically be Re-armed.

Section 6. Zone Inputs

Address

	Per Zone Options	1
736	Zone Type (16 Addresses)	1
752	Zone Options (16 Addresses)	2
768	Zone Areas (16 Addresses)	3
	Global Zone Options	
784	Max Pulse	3
785	Pulse Time	3
786	End-of-Line Resistor Type	4
787	Self Test Period	4

ZONE PROGRAMMING

Zone programming allows the Installer to configure how the Zone Inputs are processed. A "Zone Type" and a number of processing options are programmed for each individual Zone, while parameters for Pulse Counting, Terminating Resistors and Zone Self Testing are programmed as global Zone Options.

PER ZONE OPTIONS

736 to **751**

ZONE TYPE (16 Addresses)

Zone:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751

Data type: Value

Range: 0 - 9

0	Instant	*Default for Zones 3 to 8.* When an "Instant" Zone goes into alarm, the system immediately generates an alarm, & according to how the processing options are programmed, can trigger the sirens, strobe & other outputs; & report the alarm.
1	Delayed	*Default for Zone 1.* A "Delayed" Zone will have Entry/Exit delay periods applied, as programmed in the "Entry delay" and "Exit delay" Addresses for the Area that the Zone is assigned to. (General Area/Area 1 in a Single Area system)
2	Hand-over	*Default for Zone 2.* When a "Handover" Zone goes into alarm, the alarm will be processed under these two conditions: · If a Delayed Zone has already been triggered in the same Area, the system will ignore the alarm for the duration of the Entry or Exit timer. · If a Delayed Zone has not been triggered, the system will process the Zone as an "Instant" Zone.
3	24 Hour Burglary	A "24 Hour Burglary" Zone is permanently armed. When the Zone goes into alarm it can trigger the sirens, strobe, and other outputs and report the alarm according to how the processing options are programmed. If the siren is triggered a Burglary siren tone will sound.
4	24 Hour Fire	A "24 Hour Fire" Zone is permanently armed. When the Zone goes into alarm it can trigger the sirens, strobe, and other outputs and report the alarm according to how the processing options are programmed. If the siren is triggered a Fire siren tone will sound.
5	24 Hour Panic	A "24 Hour Panic Zone" is permanently armed. Panic alarm processing is determined by the "Emergency Options". (Address 869, Option 1 & 2). If the siren is triggered a Panic siren tone will sound. If the dialer is enabled a "Panic" report is sent to the Central Station.
6	24 Hour Duress	A "24 Hour Duress Zone" is permanently armed. Duress alarm processing is determined by the "Emergency Options". (Address 869, Option 7) If the dialer is enabled a "Duress" report is sent to the Central Station.

7	Spare	
8 *	Key Switch Arming	A “Key Switch “ Zone will arm the Area it is assigned to when the Zone goes Un-sealed. The Zone can be programmed for momentary or latching operation in “General Options”. (Address 868, Option 6. Default setting is “Momentary”)
9 *	Key Switch HOME	A “Key Switch HOME” Zone will Arm the Area it is assigned to in HOME mode when the Zone goes Un-sealed. The Zone can be programmed for momentary or latching operation in “General Options”. (Address 868, Option 6. Default setting is “Momentary”)

* NOTE: “Key Switch” Zones can be used to Disarm Area 4 when enabled as a Sub-Area, but Area 4 will not Arm unless all the Areas in the Sub-Area List are Armed.

752 to **767** **ZONE OPTIONS (16 Addresses)** *Defualt = No options Selected*

Zone:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767

Data type: Option

Zone Options allows various processing options to be selected for each individual Zone.

1	Silent	When this option is selected, the Zone will not trigger the siren.
2	One-Shot Siren	This option allows the Zone to trigger the Siren only once during an arming cycle. A Zone Restore will be reported on Opening (Area Off).
3	One-Shot Dialer (“Single Hit”)	This option allows a Zone to trigger the Dialer only once during an arming cycle. If Multi-break reporting is required, this option must not be selected. Highly recommended for “Domestic Dialer” format
4	Pulse Count	This option selects the Zone to be Pulse Counted. The zone will only create an alarm if: -The “Maximum Pulses” are triggered during the “Pulse Time”. -OR, the Zone is still in alarm when the “Pulse Time” expires. These options are programmed in the Global Zone Options described below.
5	Self-Test Zone	Any Zones defined as a “Self-Test Zone” are required to go into the un-sealed state at least once within the “Self-Test Period”, or a Self-Test system input alarm will be generated. Self-Test Zones are monitored for activity while the Area that they are assigned to is Dis-armed. Only Zones that will go into the un-sealed state in the normal course of daily activity should be defined as a Self-Test Zone. e.g. Movement detectors and Door contacts that get activated when the system is Dis-armed. The Self-Test period is programmed in Address 787.
6	Day Alarm Zone	If a Zone is defined as a Day Alarm, then when the Area that the Zone is assigned to is Dis-armed, the Zone can trigger an Auxiliary that has the “Day Alarm” Event Type assigned. (Address 816 to 825, Event Type 34) When the Area is Armed, the Zone will generate an alarm as per it’s Zone Type.
7	Home Zone	If a Zone is defined as a Home Zone, it will be Armed when the Area that it is assigned to is Armed in Home mode.
8	Normally Open.	Zones that are defined as “Normally Open” will go into alarm when the alarm contacts on the device are Sealed, and will restore when the contacts are Un-sealed. i.e. Reverses the “Seal” and “Alarm” states on the Zone Input. This option can be used when monitoring devices with Normally Open alarm contacts are used. e.g. Certain Smoke Detectors, etc.

ZONE AREAS

Zones must be assigned to an Area before they can be processed by the system.
If the system is configured for “Single Area mode”, then all the Zones that are used, must be assigned to the General Area / Area 1.
(Single Area / Multi-Area mode is selected in Multi-Area Options; Address 960, Option 1. Default is Single Area mode)

If the system is configured for “Multi-Area mode”, then each Zone is assigned to one or more Areas, depending on the system requirements.

Any Zone not assigned to any Area is considered as an unused Zone.

768 to **783** **ZONE AREAS (16 Addresses)**

Zone Area Addresses:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783

Data type: Option

This data sets the Area/s that the Zone will be assigned to. Zones are normally only assigned to one Area. A separate Address is used for each Zone Input as per the table above.

Option:	When Selected:
1	*Default for Zones 1 to 8.* Zone is assigned to Area 1
2	Zone is assigned to Area 2
3	Zone is assigned to Area 3
4	Zone is assigned to Area 4

GLOBAL ZONE OPTIONS

PULSE COUNTING

For any Zone defined as a Pulse Count Zone, the Zone must go into alarm at least the number of times specified in the “Maximum Pulse count”, within the specified “Pulse time” for the alarm to be recognised.

784 **MAX PULSE COUNT** *Default = 0*

Data type: Value

This data sets the maximum Pulse count for any Zones defined as “Pulse count” Zones in the Zone Options. (Addresses 752 to767, Option 4)

Range:
0 - 15

785 **PULSE TIME** *Default = 0*

Data type: Value

This data sets the Pulse count period, for any Zones defined as Pulse count Zones in the Zone Options. (Addresses 752 to767, Option 4)

Range:
0 - 255 Sec.

786 **END-OF-LINE RESISTOR TYPE**

Data type: Value
This data sets the value/s of the End-Of-Line (Terminating) resistor/s used for the Zone inputs. This is a global setting for all Zone inputs connected to the system.

Range: 0 - 15

Single End-Of-Line		Dual End-Of-Line	
0	1K	11	2K2, 2K2
1	1K5	12	2K2, 6K8
2	2K2	13	3K3, 6K8
3	3K3 *Default.*	14	Zone Doubling.* 1k, 3k3, 6K8
4	3K9	15	Zone Doubling.* 1k, 3k3, 6K8 No separate tamper state.
5	4K7		
6	5K6		
7	6K8		
8	10K		
9	12K		
10	22K		

*NOTE: The “Zone Doubling” option allows Zones 1 to 8 on the Control Module to support two detection devices on each Zone input. The additional 8 devices will be recognised and processed as Zones 9 to 16. Zone Inputs on the plug-on Zone/Auxiliary Expander board will be ignored.

The installation kit provides 1k, 3k3 and 6k8 Resistors. Typical “Terminating Resistor” settings will be:
If Single End-Of-Line is used: 3 (3k3)
If Dual End-Of-Line is used: 13 (3k3, 6k8)
If Zone Doubling is used: 14 (1k, 3k3, 6k8)
If the system is replacing another product, and the detectors already have Terminating Resistors of a different value, the Terminating Resistors may be retained by choosing the setting that matches the existing values.

787 **ZONE SELF-TEST PERIOD** *Default = 0*

Data type: Value
This data sets the number of arming periods to be included in the Zone Self-Test processing. Any Zone defined as a Self-Test Zone must go un-sealed at least once during this Self-Test period, or a Self-Test system input alarm will be generated.

Range:
0 - 16
A setting from 0 to 16 arming periods can be defined.

Section 7. System Inputs

Address

865 System Input Siren Enable 1
866 System Input Dialer Enable 1
867 System Input Siren Type 1
System Input Mapping and Functional description 2

System Inputs are system events that can generate alarms.
Each System Input has three programmable options; Siren enable, Dialer enable and Siren type.

System Inputs are always enabled. When in alarm, System Inputs that represent Fault or Tamper conditions will be indicated by the flashing "Fault" Lamp on the LED Terminal. All System Input alarms can be individually viewed/acknowledged via "Fault Analysis Mode" <NEXT 25>.
(*See System Input Mapping in this section & Section 1: Installation*)
To enable selected System Inputs to also activate the Siren and/or Dialer, the "Siren Enable" and "Dialer Enable" options must be programmed.

Note: The "Keypad Lockout" function is normally enabled (via the defaults) with a "Keypad Lockout Time" of 60 seconds. To disable, set the Lockout time to zero. (Address 789)

865 **SYSTEM INPUT SIREN ENABLE** *Default = No System Inputs Enabled for Siren*

Data type: Option

Option:	When Selected:
1	Enable Siren on AC fail
2	Enable Siren on Low battery
3	Enable Siren on Cabinet Tamper
4	Enable Siren on Keypad Lockout
5	Enable Siren on Comms fail / System reset
6	Enable Siren on Siren Monitor
7	Enable Siren on PWR Fuse / Battery Fuse

Note: Zone Self-test Fail alarms are enabled individually in Zone Input programming.

866 **SYSTEM INPUT DIALER ENABLE** *Default = No System Inputs Enabled for Dialer.*

Data type: Option

If the system input has been enabled, and if the dialer option is selected, then when the system input goes into alarm, the Concept 16 will attempt to report via the on board dialer.

Option:	When Selected:
1	Enable Dialer on AC Fail
2	Enable Dialer on Low Battery
3	Enable Dialer on Cabinet Tamper
4	Enable Dialer on Keypad Lockout
5	Enable Dialer on Comms Fail / System Reset
6	Enable Dialer on Siren Monitor
7	Enable Dialer on PWR Fuse / Battery Fuse
8	Enable Dialer on Zone Self-test Fail (Zone Self-test Fail does not activate the "FAULT" Lamp)

867 **SYSTEM INPUT SIREN TYPE**

Data type: Value

This option selects the type of siren sound that will be generated if a System Input has been selected to activate the Siren.

Range: 0 - 2

0 *Default.* One second burst.
1 Ten seconds burst.
2 One second burst every 60 seconds for the programmed Siren Time (Typically 5 minutes), OR until alarm is acknowledged.

SYSTEM INPUT MAPPING AND FUNCTIONAL DESCRIPTION

System Inputs are mapped to the Input Numbers shown in the following table.

ALARM	INPUT No.	Zone Lamp	DESCRIPTION	
			Goes Into Alarm when:	**Restores when:**
AC Fail	101	1	The AC mains has been absent for more than the specified time period (AC Fail Delay). When the input is in alarm the AC indicator on theTerminal will flash.	The AC mains is restored.
Low Battery	102	2	The battery voltage falls below 11.2V during Battery Test or while AC supply is not present. (Battery voltage is too low to provide backup power if AC fails.)	The battery voltage is restored to above 11.2V.
Cabinet Tamper	103	3	The Control Panel cabinet cover is removed or the cabinet is removed from it's mounting surface, causing the Tamper Input to go unsealed.	The Tamper Input is sealed.
Siren Monitor Alarm	104	4	The Siren speaker is disconnected from the Control Panel. ***1**	The input will restore when the connection is restored.
PWR Fuse fail	105	5	Power fuse has blown. (Due to Short circuit or over-current condition.)	The fuse has been replaced.
Battery Fuse fail	106	6	Battery fuse has blown. (Due to Short circuit or over-current condition.)	The fuse has been replaced.
Comms Fail	107	7	System failed to report. Attempts to dial out on both primary and backup telephone numbers have failed. The system will try to dial again after waiting 30 minutes. ***2**	On the next successful dial.
System Reset	108	8	The Control panel has been reset.	
Keypad Lockout	109	9	The System has registered 5 incorrect PIN code attempts in a row. The system will not allow keypad access for a specified period of time. (See location KEYPAD LOCKOUT TIME in the Timer section.)	The lockout period has expired.
Zone Self Test Fail	110	10	Any zone flagged as a self-test zone has failed the self-test criteria. (Does not activate the "FAULT" Lamp)	Alarm has been acknowledged via "Zone Slf Test Display" (NEXT, 26)
Keypad Medical Alarm ***3**	111	11	Medical Alarm has been activated on a Terminal keypad.	
Keypad Panic Alarm ***3**	112	12	Panic Alarm has been activated on a Terminal keypad.	
Keypad Duress Alarm ***3**	113	13	A Duress PIN code has been entered on a Terminal keypad.	
Keypad Fire Alarm ***3**	114	14	Fire Alarm has been activated on a Terminal keypad.	
Programming Change	115	16	Programming change in system database.	
Door Alarm. Door 1.	116	15	Door Forced <u>or</u> Door Held condition on specified Door. Note: The system does not differentiate between a Door Forced and Door Held condition.	Door Forced or Door Held condition restored on specified Door.
Door Alarm. Door 2.	117			
Door Alarm. Door 3.	118			
Door Alarm. Door 4.	119			
Test Report	120		Automatic (Periodic) or Manual Test Report is triggered.	

NOTES:

1) If the Siren output is not used, or a High impedance device is connected (e.g. Piezo siren), a 6k8 resistor must be installed across the Siren output to prevent the Siren Monitor Alarm from being activated.

2) Period specified by Telecommunications authority requirements.

3) Siren and Dialer operations for Keypad System Input alarms (Medical, Panic, Duress and Fire) are programmed in the “Emergency Options” programming. (Address 869)

Section 8. Auxiliary Output Programming

Address

816 to 825 Auxiliary Event Type 1
832 to 841 Auxiliary Timers 2
848 to 857 Auxiliary Response 2
Auxiliary Event Type details 3, 4

These Addresses set the programming options for the ten Auxiliaries AUXILIARY 1 to AUXILIARY 10. Each Auxiliary has 3 Addresses related to the programming.

816 to **825** **AUXILIARY EVENT TYPE**

The Auxiliary Event Type detemines which Entity or Event will the control the Auxiliary.
To define the way in which the Auxiliary is controlled, the “Auxiliary Response” must also be programmed.

Data type:	Auxiliary Number:	1	2	3	4	5	6	7	8	9	10
Value	Event Type Address:	816	817	818	819	820	821	822	823	824	825

Range: 1 - 59

Summary of Auxiliary Event Types.
For a full explanation of Auxiliary Event Types refer to the table at the end of this section.

0	User (Master) Control/Test Only. (via NEXT 24)	30	Zone 14 in Alarm *
1	Burglary Alarm. ***Default for Auxiliary 1. (Strobe)***	31	Zone 15 in Alarm *
2	Fire Alarm	32	Zone 16 in Alarm *
3	Area 1 Armed In Normal Mode	33	Spare
4	Area 2 Armed In Normal Mode	34	Any “Day Alarm” Zone Unsealed * ^
5	Area 3 Armed In Normal Mode	35	Timezone 1 Valid
6	Area 4 Armed In Normal Mode	36	Timezone 2 Valid
7	Area 1 Armed In Home Mode	37	Timezone 3 Valid
8	Area 2 Armed In Home Mode	38	Timezone 4 Valid
9	Area 3 Armed In Home Mode	39	Any Zone Bypassed (Isolated) on Arming
10	Area 4 Armed In Home Mode	40	Any System Input in Alarm
11	Spare	41	Door 1 Alarm
12	Spare	42	Door 2 Alarm
13	Spare	43	Door 3 Alarm
14	Spare	44	Door 4 Alarm
15	Entry Timer - General Area / Area 1	45	Area1 Auto Arm Pre-warning
16	Exit Timer - General Area / Area 1	46	Area2 Auto Arm Pre-warning
17	Zone 1 in Alarm *	47	Area3 Auto Arm Pre-warning
18	Zone 2 in Alarm *	48	Area4 Auto Arm Pre-warning
19	Zone 3 in Alarm *	49	Alarm in Area 1
20	Zone 4 in Alarm *	50	Alarm in Area 2
21	Zone 5 in Alarm *	51	Alarm in Area 3
22	Zone 6 in Alarm *	52	Alarm in Area 4
23	Zone 7 in Alarm *	53	Entry / Exit Timer Area 1
24	Zone 8 in Alarm *	54	Entry / Exit Timer Area 2
25	Zone 9 in Alarm *	55	Entry / Exit Timer Area 3
26	Zone 10 in Alarm *	56	Entry / Exit Timer Area 4
27	Zone 11 in Alarm *	57	Smoke Detector Reset *
28	Zone 12 in Alarm *	58	Comms Fail
29	Zone 13 in Alarm *	59	Follow Siren

* These Event Types can only be turned On by the specified Event, and must be turned Off by a Timer.
i.e. Program an Auxiliary Time for the Auxiliary & in the Auxiliary Response Options, do not Enable Option 3.

^ Event Type 34. Event activated whenever Any “Day Alarm” Zone goes Unsealed when the Area that it is assigned to is Disarmed (Turned Off).

Address

832 to **841** **AUXILIARY TIMERS** *No Default settings*

If an Auxiliary output needs to be timed, these Addresses set the time period that the Auxiliary will remain on when activated.

Data type: Value

Auxiliary Number:	1	2	3	4	5	6	7	8	9	10
Timer Address:	832	833	834	835	836	837	838	839	840	841

Range: 0 - 255 Min. or Sec.

A value of 0 means that no timer will operate, and the Auxiliary will only be controlled as per the settings of options 2 & 3 in the "Auxiliary Response" programming.

Second timer: If the timer is required to time from 1 to 255 Seconds, program the second value and ensure that Option 4 in the "Auxiliary Response" programming is not selected.

Minute timer: If the timer is required to time from 5 to 255 Minutes, program the minute value and ensure that Option 4 in the "Auxiliary Response" programming is selected.
(If a timer value of 1 to 4 Minutes is required, program the timer in Seconds)

IMPORTANT NOTE: Any Auxiliary that has been programmed as an Auxiliary Event Type 17 to 32, 34 & 57 should have an Auxiliary Timer programmed.

848 to **857** **AUXILIARY RESPONSE** *Default = All Auxiliaries: Options 2 & 3 Selected.*

This Address sets the way each Auxiliary will respond when the programmed event occurs.

Data type: Option

User Control. Note that all Auxiliaries can also be Controlled &/or Tested by "Master" Users via NEXT 24 "Auxiliary Control & Test" Mode.

Auxiliary Number:	1	2	3	4	5	6	7	8	9	10
Response Address:	848	849	850	851	852	853	854	855	856	857

Option:	When Selected:
1	The Auxiliary will function as a "Normally Closed" output. (i.e. Output is inverted) (The Auxiliaries are "Open Collector" outputs, and normally switch the output to 0V when On)
2	Auxiliary will turn On when event goes valid. *Default: Selected for All Auxiliaries.*
3	Auxiliary will turn Off when event goes invalid. *Default: Selected for All Auxiliaries.*
4	Auxiliary Timer will time in Minutes. (The Auxiliary Timer will normally time in Seconds)

Most Auxiliaries can be turned Off by an Auxiliary Timer and/or the Event going Invalid.
This will be determined by the Auxiliary Timer programming and the setting of Option 3 in the Auxiliary Response Options.

The table below shows how these two programming options effect how the Auxiliary will turn Off.

	Option 3: Off when Event goes Invalid	
Auxiliary Timer	**Not Selected**	**Selected***
Zero	Auxiliary will be latched On permanently.	Auxiliary Off when Event goes Invalid.
Non-zero	Auxiliary Off when Aux Timer expires.	Auxiliary Off when Aux Timer expires OR Event goes Invalid. (Whichever occurs first)

* Auxiliaries 17 to 32, 34 and 57 - "Zone xx in Alarm", "Day Alarm" and "Smoke Det Reset".
Option 3 (Aux Off when event goes invalid) is not relevant for these Auxiliary Event Types and should not be selected. These Event Types must be turned Off by an Auxiliary Timer.

AUXILIARY EVENT TYPE DETAILS

No.	Auxiliary Event Type:	Event On (Valid) when:	Event Off (Invalid) when:
0	User (Master) Control/Test only	Turned On via NEXT 24 "Auxiliary Control & Test" Mode.	Turned Off via NEXT 24 "Auxiliary Control & Test" Mode.
1	Burglary Alarm (Strobe)	Any Burglary alarm. (Alarm on Zone Types 0, 1, 2 or 3)	The Area that the Alarm occured in, is Disarmed (Turned Off).
2	Fire Alarm	Any Fire alarm . (Alarm on Zone Type 4)	System Dis-armed. (In multi Area systems, when any Area is disarmed)
3	Area 1 Armed	Area Armed in Normal Mode.	Area Disarmed.
4	Area 2 Armed		
5	Area 3 Armed		
6	Area 4 Armed		
7	Area 1 Armed In Home Mode	Area Armed in Home mode.	Area Dis-armed in Home mode.
8	Area 2 Armed In Home Mode		
9	Area 3 Armed In Home Mode		
10	Area 4 Armed In Home Mode		
11	Spare		
12	Spare		
13	Spare		
14	Spare		
15	Entry (Used for Single Area systems or Area 1 in Multi Area systems)	General Area / Area 1 Entry timer on.	General Area / Area 1 Entry timer off.
16	Exit (Used for Single Area systems or Area 1 in Multi Area systems)	General Area / Area 1 exit timer on.	General Area / Area 1 exit timer off.
17	Zone 1 in Alarm *	Zone in Alarm. (When Area is Armed)	Off by Auxiliary Timer.
18	Zone 2 in Alarm *		
19	Zone 3 in Alarm *		
20	Zone 4 in Alarm *		
21	Zone 5 in Alarm *		
22	Zone 6 in Alarm *		
23	Zone 7 in Alarm *		
24	Zone 8 in Alarm *		
25	Zone 9 in Alarm *		
26	Zone 10 in Alarm *		
27	Zone 11 in Alarm *		
28	Zone 12 in Alarm *		
29	Zone 13 in Alarm *		
30	Zone 14 in Alarm *		
31	Zone 15 in Alarm *		
32	Zone 16 in Alarm *		
33	Spare		
34	Day Alarm*	Any “Day alarm” Zone Type Unsealed when Area not Armed.	Must be programmed to turn Off by an Auxiliary Timer.
35	Timezone 1	TimeZone Valid.	TimeZone Invalid.
36	Timezone 2		
37	Timezone 3		
38	Timezone 4		

Continued on following page.

AUXILIARY EVENT TYPE DETAILS

No.	Auxiliary Event Type:	Event On (Valid) when:	Event Off (Invalid) when:
39	Zone Bypassed On Arming	Any Zone Bypassed (Isolated) on arming.	Any Area turned off.
40	System Alarm	Any system input in alarm.	System input acknowledged and no system input remaining in alarm.
41	Door 1 Alarm	Door Forced or Door Held Alarm on the specified Door.	Door Forced or Door Held Restored on the specified Door.
42	Door 2 Alarm		
43	Door 3 Alarm		
44	Door 4 Alarm		
45	Area 1 Auto Arm Prewarn	Auto-Arm Pre-warn started in the specified Area. (Pre-warn timer programmed in Address 870)	Auto-Arm Pre-warning expired. (Area on)
46	Area 2 Auto Arm Prewarn		
47	Area 3 Auto Arm Prewarn		
48	Area 4 Auto Arm Prewarn		
49	Alarm. General Area / Area1	Any Alarm in the specified Area.	Area Disarmed.
50	Alarm. Area 2		
51	Alarm. Area 3		
52	Alarm. Area 4		
53	Entry / Exit. General Area / Area 1	Entry or Exit timer running in the specified Area.	Entry or Exit timer cancelled or expired in Area.
54	Entry / Exit. Area 2		
55	Entry / Exit. Area 3		
56	Entry / Exit. Area 4		
57	Smoke Detector Reset *	"Smoke Detector Reset" operation is performed at a Terminal. PIN code, <NEXT>, 99. (User must have "Master" User Type)	Must be programmed to turn Off by an Auxiliary Timer.
58	Comms Fail	System failed to report.	On the next successful dial.
59	Siren	Siren active.	Siren off.

* Auxiliaries 17 to 34 and 57 - “Zone xx Unsealed”, “Door Bell”, “Day Alarm” and “Smoke Det Reset”.
Option 3 (Aux Off when event goes invalid) is not relevant for these Auxiliary Event Types and should not be selected. These Event Types must be turned Off by an Auxiliary Timer.

Section 9. Terminal Programming

Address

961 Terminal Area Mode 1
952 to 955 Terminal Associated Area (4 Addresses) 1
872 Door Unlock Time 2

Commissioning Terminals 2

961 **TERMINAL AREA MODE** *Default = Multi-Area Mode (All Terminals)*

Data type: Option

Setting the Area mode for each Terminal has two functions:

1. Defines how Arming & Disarming operations from the Terminal are performed.
- Single Area Mode: PIN Code, <ON>/<OFF>; Arms/Disarms only the Area associated with the Terminal.
  PIN Code, <Area Number>, <ON>/<OFF>; Arms/Disarms the specified Area if the User has permission.
  See User manual for details.
- Multi-Area Mode: PIN Code, <ON>/<OFF>; Arms/Disarms all Areas.
  PIN Code, <Area Number>, <ON>/<OFF>; Arms/Disarms the specified Area if the User has permission.
  See User manual for details.

2. Defines what Zone information will be displayed on the Terminal.
- Single Area mode: Only Zones in the associated Area will be displayed on the Terminal Zone Lamps.
- Multi-Area mode: Zones in all Areas will be displayed on the Terminal Zone Lamps.

IMPORTANT NOTE: Enhanced Terminals can only operate in Single Area Mode.

Option:	When Selected:
1	Sets Terminal 1 to Single-Area Mode.
2	Sets Terminal 2 to Single-Area Mode.
3	Sets Terminal 3 to Single-Area Mode.
4	Sets Terminal 4 to Single-Area Mode.

952 to **955** **TERMINAL ASSOCIATED AREA (4 Addresses)** *Default = 1: Area 1 (All Terminals)*

Data type: Value

Range: 1 - 4

This Address sets the Area that the Terminal is associated with. This determines the Area used for:
-Arming/Disarming operations.
-Zone Lamp display.
-Entry/Exit warnings.
On Enhanced Terminals, the Associated Area is also used in Door Access processing.
-If the Terminal's Associated Area is not assigned to the User, Door Access will be denied.
-If Associated Area is On, and the Area is assigned to the User, Area will turn Off and Access will be granted.

-Arm/Disarm operations and Zone Lamp display: Associated Area programming is only relevant if the Terminal is set to "Single Area" mode in Address 961. *See above.*
-Entry/Exit warnings: Associated Area programming selects which Area the Terminal will sound Entry/Exit warnings for, regardless of whether the Terminal is set to Single Area or Multi-Area Mode.

Terminal Number:	1	2	3	4
Associated Area Address:	952	953	954	955

Value:	When Selected:
1	Area 1 is associated with the Terminal.
2	Area 2 is associated with the Terminal.
3	Area 3 is associated with the Terminal.
4	Area 4 is associated with the Terminal.

NOTES: Zone activity display on Terminals (Address 868 - General Options, Option 8). If this option is not selected, Zone activity will not be displayed on Terminals when the System / Associated Area is Disarmed.

872 **DOOR UNLOCK TIME** *Default = 5 Seconds (All Terminals)*

Data type: Relevant to Enhanced Terminals only.
Value This Address sets the time that the Lock Auxiliary output on the Enhanced Terminals will remain on, to unlock the associated Door.

Range:
0 - 60 Sec. ACCESS CONTROL NOTES:

1) MAXIMUM DOOR OPEN TIME. The Maximum Door Open Time is 4 x Unlock time.
e.g. If the Door Unlock time is 5 Seconds, the Maximum Door Open Time will be 20 Seconds.

2) DOOR ALARMS:
-DOOR HELD (DOTL). If the Door Reed input on the Enhanced Terminal remains un-sealed for longer than the Maximum Door Open time after a valid Door Access event, a Door Alarm will be generated for that Door.

-DOOR FORCED. If the Door Reed input on the Enhanced Terminal goes un-sealed without a valid Door Access event, a Door Alarm will be generated for that Door.

-The system does not differentiate whether a Door Alarm is caused by a "Door Held (DOTL) or "Door Forced" condition.

5) DOOR RE-LOCK.
If the Door Reed switch is connected to Zone 2 on the Enhanced Terminal, the system monitors the state of the Door (Opened or Closed), and detects when the Door is opened after being un-locked.
This allows the system to cancel the Lock Auxiliary ("Clip" the Door Unlock Time) as soon as the Door is opened, ensuring that the Door is re-locked when it closes, and preventing Door "bounce".

COMMISSIONING THE TERMINALS

1. **Enable Terminal Configuration Mode.**
   Method 1: Remove power from the Terminal.
   Hold down the <NEXT> and <HOME> keys.
   Re-apply power to the Terminal.
   Release the <NEXT> and <HOME> keys.

   Method 2: Hold down the <NEXT> and <HOME> keys.
   Short the "RST" (Reset) link on the rear of the Terminal.
   Release the <NEXT> and <HOME> keys.

2. **Note the current Address setting.**
   The current Address of the Terminal will be displayed via the Zone 1 to 4 Lamps.
   The Zone Lamp number that corresponds to the current Address will flash.

3. **Select the new Terminal Address number.**
   Press the key that corresponds to the required Address (1 to 4) within 10 seconds, then press <ENTER>.

   When the <ENTER> key is pressed, a Standard Terminal will now exit Terminal Configuration Mode.

4. **Note the current Door Alarm enable status. ENHANCED TERMINALS ONLY.**
   After the Terminal Address has been entered as per Step 3, the display will now show the current Door Alarm enable status: 0 = Disabled (Default)
   1 = Enabled

5. **Enable / Disable Door Alarm. ENHANCED TERMINALS ONLY.**
   If an Enhanced Terminal is required to generate the Door Alarm to indicate a "Door Forced" or "Door Held" condition, then "Door Alarm" must be enabled for that Terminal.

   To Enable or Disable, select the option required (0 or 1) within 10 seconds, then press <ENTER>.

   When the <ENTER> key is pressed, the Enhanced Terminal will now exit Terminal Configuration Mode.

6. **Initialize the LAN.**
   When all Terminals are configured and connected to the Control Module via the system LAN, the LAN must be initialized by Removing and Re-applying power to the Control Module.
   Remember to disconnect the battery also when removing power.
   NOTE: Not required if Terminals are commissioned before the "CLK" and "DATA" wires are connected to the Control Module.

Section 10. Communications

Communications programming sets all the parameters and options for:
-Contact ID or Domestic Dialer reporting.
-Dialer Test reporting.
-Remote Dial-up connection.
-Serial Port communications.

Address		
	Dialer	
	Telephone numbers	1
16	Primary telephone number (15 Addresses)	2
32	Secondary telephone number (15 Addresses)	2
64	Call back telephone number (15 Addresses)	2
48	Reporting format	2
49	Dialer options	2
50	Maximum attempts	2
	Test reporting	
51	Test report period	3
52	Test report hour	3
53	Test report minute	3
	Remote connect	
54	Remote connect options	3
80	Rings to answer	3
81	Answer machine bypass	3
	Serial Port Options	
82	Port 0 Communications Task	4
83	Port 0 Baud rate	4
	Client Codes	
896	General Area / Area 1 Client Code (4 Addresses)	4
900	Area 2 Client Code (4 Addresses)	4
904	Area 3 Client Code (4 Addresses)	4
908	Area 4 Client Code (4 Addresses)	4
	Contact ID Event Codes	5

TELEPHONE NUMBERS

When the system is required to report to a Central Station or a Telephone,
OR the system is required to Callback a PC that is dialing in for Remote connection, you will be required to program one or more Telephone numbers.

Telephone numbers are programmed as a Sequential number of up to 16 digits using the keys shown in the following table.

Telephone number digit to program:	0 to 9	#	*	Pause (1 Second)
Key to Press on LED Terminal keypad:	<0> to <9>	<#>	<*>	<NEXT>
Value displayed on Zone Lamps:	0 to 9	10	11	12

e.g. Telephone number: 1 Pause 1234 5678 is entered by the key sequence:
<*>, 1, <NEXT>, 1, 2, 3, 4, 5, 6, 7, 8, <ENTER>

Telephone number selection.
Remember that only the Start Address is selected for programming Telephone numbers; and that <#>, <#>, cannot be used to move on to the next Address when programming sequential numbers.

Quick Telephone number selection. When programming Telephone numbers, Press <HOME> to move on to the next Telephone number to program.
If you are programming more than one telephone number, this eliminates the need to select the Address of the next number to program.
The Telephone numbers are presented in the sequence: Primary Number, Secondary number, Callback number. e.g. If the Secondary number has been programmed, pressing <HOME> will move on to the Callback number, and pressing <HOME> again will jump back to the Primary number.

Address

16 **PRIMARY TELEPHONE NUMBER. (16 Addresses)**

Data type: Value
When the system is required to report to a Central Station or a Telephone, this is the first Telephone number the Control Module will dial.

Range:
0 - 12

32 **SECONDARY TELEPHONE NUMBER. (16 Addresses)**

Data type: Value
If the Primary Telephone number fails, the dialer will then try the Secondary Telephone number. If this fails the dialer will alternate between the two numbers until the "Maximum Attempts" (Address 50) are reached.

Range:
0 - 12

64 **CALL BACK TELEPHONE NUMBER. (16 Addresses)**

Data type: Value
This Address sets the Telephone number that the system will use when dialing back the computer.

The "Remote connect with Callback" option must be selected. (Address 54. Select option 2)

Range:
0 - 12

48 **REPORTING FORMAT** *Default = 0. (No Dialer)*

Data type: Value
This Address selects the reporting format that the system will use if reporting via the dialer.

Range:
0 - 2

0	No dialer.	*Default.* When option is selected the system will not report through its on board dialer. It will operate in local mode.
1	Contact ID.	Reports alarm information in Ademco Contact ID format.
2	Domestic.	Domestic dialing enables the Control Module to send an audible tone to a private telephone number to warn the owner of activity at the premises.

NOTES: "Domestic" Dialer format.

When the alarm signal is received by the remote Telephone, the Telephone User will hear:
- Beeps of the same tone to indicate an Area Opening or Closing event.
- Beeps of 2 different tones to indicate an Alarm Event.

The alarm is acknowledged by the receiving telephone answering the call.

The Telephone User does not have to perform any operation to acknowledge the alarm.
Once the alarm signal is heard, the User can simply hang-up the telephone.

IMPORTANT NOTE:
-Once the receiving telephone has answered the call, the alarm message is regarded as being acknowledged and will not be sent again, regardless of whether a User has heard the alarm signal or not.
-This means that if an Answering Machine, Fax machine or similar device answers the call, the alarm will still be regarded as being acknowledged.
-If this feature is used, care must be excercised in selecting appropriate telephone numbers to ensure that the alarm signal will be heard by an appropriate User.

Address

49 **DIALER OPTIONS** *Default = No options selected.*

Data type: Option

Dialer options allow various reporting and remote control options to be selected.
The Installer can select the different types of messages that are to be sent to a remote Central Monitoring Station (Base station), or to a Telephone; and whether DTMF remote control is allowed.
Depending on the customer requirements, any or all of the message types, 1 to 5, listed below can be transmitted:

Option:	When selected:
1	Alarms are reported via Dialer.
2	Restorals are reported via Dialer.
3	Area Openings / Closings (Area Offs / Ons) are reported via Dialer.
4	Programming changes are reported via Dialer.
5	Opening reports will only be sent if an alarm has occurred in the previous Armed period.
6	Remote control with DTMF Card is enabled. NOTE: While a remote telephone has connected to the system to perform DTMF remote control functions, Upload/download via the dialer is temporarily disabled.
7	Isolates are reported via Dialer.

IMPORTANT NOTE: Do not select any options 1 to 5, unless a Dialer Reporting format has been selected.

50 **MAXIMUM DIAL ATTEMPTS** *Default = 10 Attempts.*

Data type: Value

This Address sets the maximum number of dialing attempts the system can make to contact the Central Monitoring Station or Domestic Telephone.

Range: 1 - 16 calls

The system will alternate betwen the Primary and Secondary Telephone numbers for each attempt. This setting represents the total number of attempts on both Telephone numbers.

IMPORTANT NOTE: Regulatory authorities may limit this number. (In Australia, ACA specify a maximum of 10 attempts. ACA Approval will be void if Max Attempts is set to a higher value)

When the maximum number of attempts has been reached, and no connection is made, the Comms Fail System Input will be activated. The system will wait 30 minutes before attempting to dial again. (This wait period is a regulatory requirement)

TEST REPORTING

Data type: Value

The following Addresses set the frequency of automatic Test reports and the time of day the Test Report is to be sent to the Central Station.

51 **Test report period**

Range: 0 -3

This option sets the frequency of the automatic Test Report. (i.e. How often a Test Report will be sent)

Data:	When selected:
0	*Default.* No Test Report will be sent.
1	Test Report sent every day.
2	Test Report sent every Monday.
3	Test Report sent on the first day of every month.

52 **Test report hour**

Range: 0 -23 (hour)

This Address sets the hour that the test report will be sent.

53 Test report minute

Range: 0 -59 (min.)

This Address sets the minute the test report will be sent.

e.g. If: The "Test Report period" option is set to 2,
the "Test Report Hour" is set to 22, and the "Test Report Minute" is set to 45.
Then a Test Report will be sent to the Central Station at 10:45 PM every Monday.

REMOTE CONNECT

Data type: Value

These options allow the Installer to program various parameters relating to remote connection for Upload/ Download and/or DTMF Telephone remote control.

54 Remote connect options

Range: 0 -2

This Address sets the remote connect method for programming the system with the Upload / Download software. Remote connect for DTMF Telephone remote control is not affected by this setting.

Data:	When selected:
0	*Default.* Remote connect not allowed
1	Remote connect enabled. (Without callback)
2	Remote connect enabled with Callback.

80 Rings to answer *Default = 16 Rings.*

Range: 1 -16 (rings)

This Address sets the number of rings before the system will answer an incoming call.
This setting is relevant to both Upload/Download connection and DTMF remote control connection.

81 Answering machine (Fax) bypass "Follow-on" time.

Range: 0 -3

This feature is used when Upload/Download software or DTMF Telephone is trying to remotely connect to the system, and an Answering Machine is connected to the same Telephone line. If this feature is enabled, the remote device must call the system, then hang up within three rings. If the remote device calls the system again within the programmed "Follow-on" time then the system will answer the call on the first ring & connect.

Data:	When selected:
0	*Default.* Answering Machine Bypass disabled
1	Follow-on time = 10 secs
2	Follow-on time = 30 secs
3	Follow-on time = 60 secs

SERIAL PORT OPTIONS

Data type: Value

Serial Port options allow the Installer to program the Communications Task and Baud rate for the Serial Port on the Control Module.

82 Port 0 Communications Task

Range: 0 -3

Data:	When selected:
0	*Default.* Serial Port not used.
1	Securitel STU. (Not yet available)
2	Serial Printer. (Not yet available)
3	Upload / Download. (Requires the Serial Adapter Cable)

NOTE: While Upload/Download software is connected and communicating with the Control Module, DTMF Remote Control is temporarily disabled.

83 **Port 0 Baud Rate**

Range:	Data:	When selected:
0 -3	0	300
	1	1200
	2	4800
	3	*Default.* 9600

84 **Port 1 Communications Task** (Spare. Not yet available)
85 **Port 1 Baud Rate** (Spare. Not yet available)

CLIENT CODES

Data type:
Value

A four-digit Client Code is used to identify the system (premises) to the Central Station and must be programmed if the system is reporting in the "Contact ID" format. (*See Address 48. Reporting Format*) The Client Code will be supplied by the Central Station.

Range:
0 -9

Single Area system. Only one Client Code is required, and this is programmed as the "General Area / Area 1 Client Code.
Multi-Area system. The Client Code must be programmed separately for every Area that is used.
If a common Client Code is to be used for all Areas in use, then this Client Code must still be programmed separately for each of the Areas.

A Client Code is programmed as a Sequential number of 4 digits.
Remember that only the Start Address is selected for programming a Client code; and that <#>, <#>, cannot be used to move on to the next Address when programming sequential numbers such as Client Codes.

896 **General Area / Area 1 Client Code (4 Addresses)**

This is the Client Code that will be used in Single Area systems, or for Area 1 in Multi-Area systems.

900 **Area 2 Client Code (4 Addresses)**

This is the Client Code that will be used for Area 2 in Multi-Area systems.

904 **Area 3 Client Code (4 Addresses)**

This is the Client Code that will be used for Area 3 in Multi-Area systems.

908 **Area 4 Client Code (4 Addresses)**

This is the Client Code that will be used for Area 4 in Multi-Area systems.

Contact ID Events

Each event in Contact ID is sent as a string of 16 DTMF digits. For example, an alarm followed by a restore and then an opening would be 3 events. All Contact ID strings follow the format: CCCC 18 SXYZ GG PPP K where:

CCCC 4 digit client code that identifies the panel or site.
18 Always the digits “18”.
SXYZ Event code.
S = Status. 1 - Alarm or Opening. 3 - Restore or Closing. (Note: Alarm Restores only reported on Area Opening)
XYZ = Type of Event.
GG Group Byte which signifies the Area being Opened/Closed or the Area in which the alarm occurred.
PPP Point ID. This refers to either the Point number or the User ID depending on the type of event.
K Checksum.

Some receivers display a “U” (User) or a “C” (Alarm Point) in front of the PPP, depending on which of these PPP represents.

TYPE OF ALARM MESSAGE	EVENT CODE	GROUP BYTE (AREA)	POINT ID
Zone Type (Zone Inputs)	XYZ	GG	PPP
0 - Instant (Burglary)	130	01 to 04	001 to 016
1 - Delayed (Entry/Exit)	130	01 to 04	001 to 016
2 - Handover	130	01 to 04	001 to 016
3 - 24hr Burglary	130	01 to 04	001 to 016
4 - 24hr Fire	110	01 to 04	001 to 016
5 - 24hr Panic	120	01 to 04	001 to 016
6 - 24hr Duress	121	01 to 04	001 to 016
Tamper	144	01 to 04	001 to 016
Isolate	570	01 to 04	001 to 016
System Inputs			^ = Restore not reported.
AC Fail	301	01	101
Low Battery	302	01	102
Cabinet Tamper	145	01	103
Siren Monitor Alarm	320	01	104
LAN Fuse fail	140	01	105
Battery Fuse fail	140	01	106
Comms Fail	354	01	107 ^
System Reset	305	01	108 ^
Keypad Lockout	140	01	109 ^
Zone Self Test Fail	307	01	110 ^
Keypad Medical Alarm	120	01	111 ^
Keypad Panic Alarm	120	01	112 ^
Keypad Duress Alarm	121	01	113 ^
Keypad Fire Alarm	110	01	114 ^
Program Altered	306	01	115 ^
Door Alarm. Door 1	140	01	116 ^
Door Alarm. Door 2	140	01	117 ^
Door Alarm. Door 3	140	01	118 ^
Door Alarm. Door 4	140	01	119 ^
Test Report	602	01	120 ^
System Input Isolate	570	01	101 to 120
Open / Close			
By User PIN code - Single Area	401	01 to 04	001 to 047
By User PIN code - General Open/Close	402	00	001 to 047
By System* - Single Area	403	01 to 04	48
By System* - General Open/Close	402	00	48
Quick Arm	408	01 to 04	48

* By Keyswitch / Remote / TimeZone / etc.

Section 11. Users

Address

	User Programming	1
96	Installer PIN Code	1
NEXT 20	Adding / Changing Users	1,2
NEXT 20	Deleting Users	2

USER PROGRAMMING

There are 48 Users in the system.
-User 1 is the Installer.
-User 2 is the Master User.
-Users 3 to 47 are Normal Users.
-User 48 is reserved for system functions (e.g. Reporting, Auto arming, etc).

See Section 2 "Introduction to Programming" for a full explanation of the Users.

The Installer can only edit their own PIN Code when in Programming Mode.
As all Installer Permissions are pre-defined and do not need to be changed, the Installer User Type and Areas cannot be edited.

To edit other Users and enrol Access Control Cards, a Master User Code must be used and the Codes edited via Operator Mode "NEXT 20. Adding / Changing / Deleting Users".
See details below or refer to the User's Manual.

96 **Installer PIN Code (4 or 6 Addresses)** *Default = 2345 (4 Digit) or 234567 (6 Digit)*

Data type:
Value

Range:
0 - 9

This location contains the 4 or 6 digit PIN code for the Installer.
The Installers PIN Code should be changed as soon as possible after installation. When choosing a new Installer PIN Code, ensure that a PIN code is chosen that will not be forgotten, while still providing security against unauthorised access.

Note that the LED display will only show the first digit of the PIN Code. The full PIN Code cannot be viewed.

NOTE: The PIN Code length is selected at Address 868. General Options, Option 3.
A length of 4 or 6 digits may be selected and applies to all User PIN Codes in the system.
The default setting is 4 Digits.

ADDING OR CHANGING A USER

1. Enter the User Editing Mode.

NEXT 20 Logon to the Terminal using a Master PIN Code, then Press [NEXT] , [2] , [0] .

2. Enter the User number to be changed.

Press [OFF #] , then the User number ['n'] ['n'] (User 2 to User 47), then [ENTER]

The User number will be displayed on the Terminal via the Zone Lamps.
NOTE: If the User number is greater than 16, the first digit will be displayed via a flashing Zone Lamp.
If you need to check the User number, press [NEXT] to view the second digit.

3. Enrol the User's Access Card. (If required)

Present the Card at any Access Reader in the system within 30 seconds of selecting the User number.

Three short beeps will sound to confirm that the Card has been enrolled and assigned to the selected User. If the Card is already assigned to another User, or is not recognised by the system, one long beep will indicate a problem.

4. Enter the new PIN Code.

Press [ON *] , then the new PIN number ['n'] ['n'] ['n'] ['n']... (4 or 6 digits), then [ENTER]

Three short beeps will sound to confirm the PIN number has been programmed. If the PIN is rejected, one long beep will sound to indicate a problem.

5. Assign the User Type.

Press [HOME] then Press [ON *] , then the new User Type number ['n'] , then [ENTER]

USER TYPE:	0	Arm only	Can only Arm the system.
	1	Arm/Dis-arm	Can Arm and Dis-arm the system.
	2	Arm/Dis-arm/Isolate	Can Arm/Dis-arm the system and Isolate Zones.
	3	Master	Can perform all operations above & Master User Operations.

2 beeps will sound to confirm the new User Type has been programmed.

6. Assign the User Area or Areas. (Only required if you have a Multi-Area System)

Press [HOME] (A long beep will sound if the System is not in Multi-Area mode)

Then for each Area that is to be assigned to this User,
Press [ON *] , then an Area option number ['n'] , then [ENTER]

OPTION:	0	All Areas De-selected.		
	1	General Area / Area 1 selected.	3	Area 3 selected
	2	Area 2 selected	4	Area 4 selected

e.g. If Area 1 and Area 3 are to be assigned to the User; Press <*>, 1, <ENTER>; <*>, 3, <ENTER>.

2 beeps will sound to confirm the new Area Option has been selected.

When access control is provided, access is only granted at Door/s associated with the User's Area/s.

DELETING A USER

1. Enter the User Editing Mode as before.

2. Enter the User number to be changed.

Press [OFF #] , then the User number ['n'] ['n'] (User 2 to User 47), then [ENTER]
The User number will be displayed on the Terminal.

3. Delete the User.

Press [ON *] , then [ENTER] to delete the PIN code and/or Card data for this User number.

QUICK PROGRAMMING GUIDE: Single Area Burglary Alarm system.

1. Determine the number of Burglary Alarm Zone Inputs that will be connected to the system.
For ease of programming; If Entry/Exit Zones are to be used, it is recommended that:
-The Zone Input device that will start the Entry Timer is connected to Zone 1.
-The "Handover" Zone Input device (If required) is connected to Zone 2.

2. Logon to the Terminal using the Installer PIN code and select MODE 2 - DEFAULTING THE CONTROL MODULE. **NEXT 02**
-Enter PIN, <NEXT>, 0, 2. Section 2. p7.

3. Select the Default Option that matches the number of Burglary Alarm Zone Inputs required.
-<*>, nn, <ENTER>. Where "nn" is the Default option. 0 = No Zones, 1 = 1 Zone, 8 = 8 Zones, etc.

NOTE: Default Zone Types: Zone 1 = 1-Delayed (Entry/Exit); Zone 2 = 2-Handover; Zones 3 to 16 = 0-Instant.
If the Default Zone Types need to be changed, program the new Zone Type in Addresses 736 (Zone 1) to 751 (Zone 16)

Enter Programming Mode (Mode 01) to program additional options & data. **NEXT 01**
-Enter PIN, <NEXT>, 0, 1.

4. IF the End-of-Line Resistors are a value other than "3k3 Single End-of-Line": **Address 786.**
Program the "End-of-Line Resistor" Value. Section 6. p4.

END-OF-LINE RESISTOR TYPES:
Single EOL: 0 -1k / 1 -1k5 / 2 -2k2 / 3 -3k3 / 4 -3k9 / 5 -4k7 / 6 -5k6 / 7 -6k8 / 8 -10k / 9 -12k / 10 -22k
Dual EOL: 11 -2k2, 2k2 tamper / 12 -2k2, 6k8 tamper / 13 -3k3, 6k8 tamper
Zone Doubed: 14 -1k, 3k3, 6k8 zone doubled / 15 -1k, 3k3, 6k8 zone doubled (no seperate tamper state)

5. Enable the System Inputs that are required to activate the Siren. **Address 865.**
Section 7. p1.

1 - AC Fail.	4 - Keypad Lockout.	6 - Siren Monitor.
2 - Low Battery.	5 - Comms Fail / System Reset.	7 - PWR Fuse / Battery Fuse.
3 - Cabinet Tamper.		

NOTE: If any of these options are selected, check the "System Input Siren Type" setting. Address 867.

0 = 1 second burst (Default).	1 = 10 second burst.	2 = 1 Sec burst every 60 Secs for 5 Mins.

6. Enable the System Inputs that are required to activate the Dialer. **Address 866.**
Section 7. p1.

1 - AC Fail.	4 - Keypad Lockout.	7 - PWR Fuse / Battery Fuse.
2 - Low Battery.	5 - Comms Fail / System Reset.	8 - Zone Self-Test Fail.
3 - Cabinet Tamper.	6 - Siren Monitor.	

How to Enter Data. Select Address: Press [OFF #], then the Address ['n'] ['n'] .. (2 or 3 digits), then [ENTER]. NOTE: Pressing [OFF #] [OFF #] will take you to the next Address.
Enter Data: Press [ON *], then the new Data ['n'] ['n'] .. (1-16 digits) OR Option to Select/De-select ['n'], then [ENTER]. NOTE: [ON *], [CLR], [ENTER] sets Data/Options to Factory Default.

7. **Enable any additional General System Options that are required.** **Address 868**

1 ^ Auto-Isolate on Arming. 4 * Clock sync. to 50Hz AC Mains. 7 Allow Master Users to edit Telephone numbers. Section 3. p1.
2 Quick Arming. 5 ^ Automatic Battery Testing. 8 * Display Zone activity when disarmed.
3 6 digit PIN codes. 6 "Latching" Key-switch operation.
^ Recommended.
* Already enabled by default.

8. **Program current Time and Date.** **NEXT 23**

Set the Real-Time Clock. Section 4. p4.
The date and time are stored in the following order: mm:hh ; DD:MM:YY ; d
i.e. Minute, Minute; Hour, Hour; Day, Day; Month, Month; Year, Year; Day Of Week: (Sunday = 1)
e.g. 1) 07:24 AM, Monday, June 5, 2001 2,4,0,7,0,5,0,6,0,1,2, <ENTER>
2) 05:15 PM, Thursday, September 20, 2001 1,5,1,7,2,0,0,9,0,1,5, <ENTER>

9. **IF the system is to report in Contact ID or Domestic Dialer formats, program the Dialer options.**

-Program the Primary & Secondary Telephone numbers. **Addresses 16 & 32.**
Section 10. p1 & 2.

-Select the Reporting Format. 1 = Contact ID. 2 = Domestic* **Address 48.**
(* DTMF Card must be fitted to Control Module) Section 10. p2.

-Select the required Dialer Options. **Address 49.**
1 - Alarms reported via Dialer. 4 - Prog. change reported via Dialer. 6 - Remote control via DTMF Card enabled.*
2 - Restores reported via Dialer. 5 - Report Open only after an alarm. 7 - Isolates reported via Dialer.
3 - Area Open/Close reported via Dialer.

-Program the Area 1 Client Code. (4 Digits -supplied by the Central Monitoring Station) **Address 896.**
Section 10. p5.

10. **IF periodic Test Reports are to be sent to the Central Monitoring Station, program the Test Report options.** **Address 51.**

-Program the Test Report period. Section 10. p3.
0 - No Test Report. 1 - Every Day.
2 - Every Monday. 3 - First day of every Month.

-Program the time of day the Test Report is to be sent. **Address 52: Hour.**
Address 53: Min.
Section 10. p3.

11. **IF Remote connection for Upload/Download or Telephone is required, program the Remote Connect options.** **Address 54.**

Enable Remote Connect: Select 1 (Remote Connect allowed) Section 10. p4.

12. **Change the Installer PIN code.** **Address 96.**

This should be done before the system is commissioned and handed over to the client. Section 11. p1.
Ensure that a new PIN code is chosen that will not be forgotten, while still providing security against unauthorised access.

13. **Program the Users.**

A Master User Code must be used to program the Users. *See Section 11: Users, or the User's Manual for details.* **NEXT 20**

Planning and Programming record sheets.

Address.	FUNCTION.		PROGRAMMED SETTING.	DEFAULT
16	PRIMARY TELEPHONE NUMBER.	Section 10. p1 & 2	_ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _	
32	SECONDARY TELEPHONE NUMBER.	Section 10. p1 & 2	_ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _	
48	REPORTING FORMAT 0 - None 1 - Contact ID	Section 10. p2 2 - Domestic dialer	__	0 - None
49	DIALLER OPTIONS	Section 10. p3		
	1 - Alarms are reported via Dialer.		No [ ] Yes [ ]	No
	2 - Restorals are reported via Dialer.		No [ ] Yes [ ]	No
	3 - Area Openings/Closings (Offs/Ons) are reported via Dialer.		No [ ] Yes [ ]	No
	4 - Program changes are reported via Dialer.		No [ ] Yes [ ]	No
	5 - Opening reports only sent after alarm has occurred.		No [ ] Yes [ ]	No
	6 - Remote Control with DTMF card is enabled.		No [ ] Yes [ ]	No
	7 - Isolates are reported via Dialer.		No [ ] Yes [ ]	No
50	MAXIMUM DIAL ATTEMPTS. CAUTION. Read manual before changing.	Section 10. p3	__ (1 - 16)	10 Attempts
51	TEST REPORT PERIOD 0 - No Test Report 2 - Test Report sent every Monday	Section 10. p3 1 - Test Report sent every day 3 - Report sent on 1st day of every month	__	0
52	TEST REPORT HOUR	Section 10. p3	__ (0 - 23)	0
53	TEST REPORT MINUTE	Section 10. p4	__ (0 - 59)	0
54	REMOTE CONNECT OPTIONS 0 - Remote connect not allowed 2 - Remote connect enabled with Callback.	Section 10. p4 1 - Remote connect enabled	__	0
64	CALL-BACK TELEPHONE NUMBER	Section 10. p1 & 2	_ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _	
80	RINGS TO ANSWER	Section 10. p4	__ (1 - 16)	16 Rings

How to Enter Data. Select Address: Press [OFF #], then the Address ['n'] ['n'] .. (2 or 3 digits), then [ENTER]. NOTE: Pressing [OFF #] [OFF #] will take you to the next Address.

Enter Data: Press [ON *], then the new Data ['n'] ['n'] .. (1-16 digits) OR Option to Select/De-select ['n'], then [ENTER]. NOTE: [ON *], [CLR], [ENTER] sets Data/Options to Factory Default.

Address.	FUNCTION.		PROGRAMMED SETTING.	DEFAULT
81	ANSWER MACHINE (FAX) BYPASS 0 - Bypass disabled 2 - Follow-on time = 30 secs	Section 10. p4 1 - Follow-on time = 10 secs 3 - Follow-on time = 60 secs	__	0
82	PORT 0 COMMS TASK 0 - Serial Port not used 2 - Printer (Not yet available)	Section 10. p4 1 - STU (Not yet available) 3 - Upload/Download	__	0
83	PORT 0 BAUD RATE 0 - 300 2 - 4800	Section 10. p5 1 - 1200 3 - 9600	__	3 - 9600
736-787	ZONE INPUT PROGRAMMING.	Section 6	***See Separate Table***	
788	SIREN TIME	Section 4. p1	___ (0 to 255 Minutes)	5 Minutes
789	KEYPAD LOCKOUT TIME	Section 4. p1	___ (0 to 255 Seconds)	60
790-809	TIMEZONE PROGRAMMING.	Section 4. p2	***See Separate Table***	
810	AC REPORT DELAY **CAUTION:** Read manual before changing.	Section 4. p3	___ (0 to 60 Minutes)	0
816-857	AUXILIARY PROGRAMMING.	Section 8	***See Separate Table***	
865	SYSTEM INPUT SIREN ENABLE 1 - AC fail 2 - Low battery 3 - Cabinet Tamper 4 - Keypad Lockout 5 - Comm Fail / System Reset 6 - Siren Monitor 7 - PWR Fuse / Battery Fuse	Section 7. p1	Options No [ ] Yes [ ] No [ ] Yes [ ] No [ ] Yes [ ] No [ ] Yes [ ] No [ ] Yes [ ] No [ ] Yes [ ] No [ ] Yes [ ]	 No No No No No No No

Address.	FUNCTION.		PROGRAMMED SETTING.	DEFAULT
866	SYSTEM INPUT DIALER ENABLE	Section 7. p1	Options	
	1 - AC fail		No [ ] Yes [ ]	No
	2 - Low battery		No [ ] Yes [ ]	No
	3 - Cabinet Tamper		No [ ] Yes [ ]	No
	4 - Keypad Lockout		No [ ] Yes [ ]	No
	5 - Comm Fail / System Reset		No [ ] Yes [ ]	No
	6 - Siren Monitor		No [ ] Yes [ ]	No
	7 - PWR Fuse / Battery fuse		No [ ] Yes [ ]	No
	8 - Zone Self-test Fail		No [ ] Yes [ ]	No
867	SYSTEM INPUT SIREN TYPE	Section 7. p1	___	0
	0 - One second burst	1 – Ten second burst		
	2 - One second burst every 60 seconds for Siren Time OR until Alarm acknowledged.			
868	GENERAL OPTIONS	Section 3. p1	Options	
	1 - Auto Isolate on Arming		No [ ] Yes [ ]	No
	2 - Quick Arming		No [ ] Yes [ ]	No
	3 - 6 Digit PIN codes (Normally 4 Digits)		No [ ] Yes [ ]	No
	4 - Clock synchronized to 50Hz AC Mains.		No [ ] Yes [ ]	Yes
	5 - Automatic Battery Testing		No [ ] Yes [ ]	No
	6 - Key Switch Zones “latching”.		No [ ] Yes [ ]	No
	7 - Enable Master User/s to edit Telephone numbers.		No [ ] Yes [ ]	No
	8 - Display Zone activity on Terminals when Area/System is Disarmed.		No [ ] Yes [ ]	Yes
869	EMERGENENCY OPTIONS	Section 3. p2	Options	
	1 – Panic alarms will activate the Siren.		No [ ] Yes [ ]	No
	2 – Panic alarms will activate the Dialer.		No [ ] Yes [ ]	No
	3 – Fire alarms will activate the Siren.		No [ ] Yes [ ]	No
	4 – Fire alarms will activate the Dialer.		No [ ] Yes [ ]	No
	5 – Medical alarms will activate the Siren.		No [ ] Yes [ ]	No
	6 – Medical alarms will activate the Dialer.		No [ ] Yes [ ]	No
	7 – Duress alarms will activate the Dialer.		No [ ] Yes [ ]	No
870	AUTOARM PRE-WARN TIME	Section 5. p2	___ (0 to 255 Seconds)	0

How to Enter Data. Select Address: Press [OFF #], then the Address ['n'] ['n'] .. (2 or 3 digits), then [ENTER]. NOTE: Pressing [OFF #] [OFF #] will take you to the next Address.
Enter Data: Press [ON *], then the new Data ['n'] ['n'] .. (1-16 digits) OR Option to Select/De-select ['n'], then [ENTER]. NOTE: [ON *], [CLR], [ENTER] sets Data/Options to Factory Default.

Address.	FUNCTION.		PROGRAMMED SETTING.	DEFAULT
871	RE-AUTOARM TIME	Section 5. p2	___ (0 to 255 Minutes)	0
872	DOOR UN-LOCK TIME	Section 9. p2	___ (0 to 60 Seconds)	5
896-947	AREA PROGRAMMING.	Section 5	***See Separate Table***	
952	TERMINAL 1 ASSOCIATED AREA 1 - Area 1 2 - Area 2 3 - Area 3 4 - Area 4	Section 9. p1	___ (1 - 4)	1
953	TERMINAL 2 ASSOCIATED AREA		___ (1 - 4)	1
954	TERMINAL 3 ASSOCIATED AREA		___ (1 - 4)	1
955	TERMINAL 4 ASSOCIATED AREA		___ (1 - 4)	1
960	MULTI AREA OPTIONS	Section 5. p1	Options	
	1 - Multi-Area Mode		No [ ] Yes [ ]	No
	2 - Enable Area 4 as the Sub-Area		No [ ] Yes [ ]	No
	3 - Include Area 1 in Area 4 Sub-Area List		No [ ] Yes [ ]	No
	4 - Include Area 2 in Area 4 Sub-Area List		No [ ] Yes [ ]	No
	5 - Include Area 3 in Area 4 Sub-Area List		No [ ] Yes [ ]	No
961	TERMINAL AREA MODE	Section 9. p1	Options	
	1 - Set Terminal 1 to Single Area Mode.		No [ ] Yes [ ]	No
	2 - Set Terminal 2 to Single Area Mode.		No [ ] Yes [ ]	No
	3 - Set Terminal 3 to Single Area Mode.		No [ ] Yes [ ]	No
	4 - Set Terminal 4 to Single Area Mode.		No [ ] Yes [ ]	No
966-985	HOLIDAY PROGRAMMING.	Section 4. p3	***See Separate Table***	
986	DAYLIGHT SAVING START MONTH	Section 4. p3	___ (0 - 12)	0
987	DAYLIGHT SAVING START WEEK	Section 4. p3	___ (1 - 5)	5

Address.	FUNCTION.	PROGRAMMED SETTING.		DEFAULT
988	DAYLIGHT SAVING DAY-OF-WEEK IN START WEEK Section 4. p3 1 - Sunday 2 - Monday 3 - Tuesday 4 - Wedesday 5 - Thursday 6 - Friday 7 - Saturday	___	(1 - 7)	1. Sunday
989	DAYLIGHT SAVING END MONTH Section 4. p4	___	(0 - 12)	0
990	DAYLIGHT SAVING END WEEK Section 4. p4	___	(1 - 5)	5
991	DAYLIGHT SAVING DAY-OF-WEEK IN END WEEK Section 4. p4 1 - Sunday 2 - Monday 3 - Tuesday 4 - Wedesday 5 - Thursday 6 - Friday 7 - Saturday	___	(1 - 7)	1. Sunday

How to Enter Data. Select Address: Press [OFF #], then the Address ['n'] ['n'] .. (2 or 3 digits), then [ENTER]. NOTE: Pressing [OFF #] [OFF #] will take you to the next Address.
Enter Data: Press [ON *], then the new Data ['n'] ['n'] .. (1-16 digits) OR Option to Select/De-select ['n'], then [ENTER]. NOTE: [ON *], [CLR], [ENTER] sets Data/Options to Factory Default.

ZONE INPUT PROGRAMMING Section 6.

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Zone 9	Zone 10	Zone 11	Zone 12	Zone 13	Zone 14	Zone 15	Zone 16
ZONE TYPE	**736**	**737**	**738**	**739**	**740**	**741**	**742**	**743**	**744**	**745**	**746**	**747**	**748**	**749**	**750**	**751**
0 - Instant 1 - Delayed 2 - Handover 3 - 24 Hour Burglary 4 – 24 Hour Fire 5 - 24 Hour Panic 6 - 24 Hour duress 7 - Spare 8 - KeySwitch Arm 9 – KeySwitch Home																
Default	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZONE OPTIONS	**752**	**753**	**754**	**755**	**756**	**757**	**758**	**759**	**760**	**761**	**762**	**763**	**764**	**765**	**766**	**767**
1 – Silent																
2 – One-shot Siren																
3 - One-shot Dialer ("Single Hit" reporting)																
4 - Pulse Count																
5 - Self-test Zone																
6 - Day Alarm Zone																
7 - Home Zone																
8 - Normally Open																
ZONE AREAS *1	**768**	**769**	**770**	**771**	**772**	**773**	**774**	**775**	**776**	**777**	**778**	**779**	**780**	**781**	**782**	**783**
Assigned to Area 1																
Assigned to Area 2																
Assigned to Area 3																
Assigned to Area 4																

GLOBAL ZONE OPTIONS	**Add.**	**Value**	**Default**
PULSE COUNT (0 - 15)	**784**		0
PULSE TIME (0 - 255 Seconds)	**785**		0
END-OF-LINE RESISTOR TYPE (0 - 15) *2	**786**		3
ZONE SELF-TEST PERIOD (0 - 16)	**787**		0

*1 Zones enabled by Default are assigned to Area 1.
(Zones 1 to 8 if Factory Default, or the specified number of Zones if Defaulted via Installer Mode 02.)

*2 END-OF-LINE RESISTOR TYPES:
Single EOL: 0 -1k / 1 -1k5 / 2 -2k2 / 3 -3k3 / 4 -3k9 / 5 -4k7 / 6 -5k6 / 7 -6k8 / 8 -10k / 9 -12k / 10 -22k
Dual EOL: 11 -2k2, 2k2 tamper / 12 -2k2, 6k8 tamper / 13 -3k3, 6k8 tamper
Zone Doubed: 14 -1k, 3k3, 6k8 zone doubled / 15 -1k, 3k3, 6k8 zone doubled. No separate tamper state.

TIMEZONE PROGRAMMING Section 4. p2.

	TIMEZONE 1	TIMEZONE 2	TIMEZONE 3	TIMEZONE 4
START HOUR (0-23) / START MINUTE (0-59)	**790 / 791**	**795 / 796**	**800 / 801**	**805 / 806**
Default	09:00	09:00	07:00	20:00
END HOUR (0-23) / END MINUTE (0-59)	**792 / 793**	**797 / 798**	**802 / 803**	**807 / 808**
Default	17:00	13:00	20:00	07:00
DAYS OF WEEK	**794**	**799**	**804**	**809**
1-Sun 2-Mon 3-Tue 4-Wed 5-Thur 6-Fri 7-Sat 8-Hol	S M T W T F S H	S M T W T F S H	S M T W T F S H	S M T W T F S H
Default	M T W T F	S S	S M T W T F S H	S M T W T F S H

AUXILIARY PROGRAMMING Section 8.

	AUX 1	AUX 2	AUX 3	AUX 4	AUX 5	AUX 6	AUX 7	AUX 8	AUX 9	AUX 10
AUXILIARY EVENT TYPE (0 to 59)	**816**	**817**	**818**	**819**	**820**	**821**	**822**	**823**	**824**	**825**
See Programming manual for Event Types.										
Default	1	0	0	0	0	0	0	0	0	0
AUXILIARY TIMERS (0-255)	**832**	**833**	**834**	**835**	**836**	**837**	**838**	**839**	**840**	**841**
(Should be programmed for Event Types 17-32, 34 & 57)										
AUXILIARY RESPONSE Default = 2 & 3 All Auxes.	**848**	**849**	**850**	**851**	**852**	**853**	**854**	**855**	**856**	**857**
1-Output is Inverted.										
2-On when Event goes Valid.										
3-Off when Event goes Invalid. (Not relevant for Event Types 17-32, 34 & 57 - Use a Timer)										
4-Timer will time in Minutes.										

How to Enter Data. Select Address: Press [OFF #], then the Address ['n'] ['n'] .. (2 or 3 digits), then [ENTER]. NOTE: Pressing [OFF #] [OFF #] will take you to the next Address.
Enter Data: Press [ON *], then the new Data ['n'] ['n'] .. (1-16 digits) OR Option to Select/De-select ['n'], then [ENTER]. NOTE: [ON *], [CLR], [ENTER] sets Data/Options to Factory Default.

AREA PROGRAMMING Section 5.

	AREA 1	AREA 2	AREA 3	AREA 4
AREA CLIENT CODE (4 Digits)	**896**	**900**	**904**	**908**
AREA ENTRY DELAY TIME (0-255 Seconds)	**928**	**929**	**930**	**931**
Default	30	0	0	0
AREA EXIT DELAY TIME (0-255 Seconds)	**936**	**937**	**938**	**939**
Default	60	0	0	0
AREA ARMING OPTIONS	**944**	**945**	**946**	**947**
0-No TimeZone Control 2-TimeZone 1 Control 2-TimeZone 2 Control 3-TimeZone 3 Control 4-TimeZone 4 Control				

HOLIDAY PROGRAMMING Section 4. p3.

	HOL 1	HOL 2	HOL 3	HOL 4	HOL 5	HOL 6	HOL 7	HOL 8	HOL 9	HOL 10
HOLIDAY MONTH (0 - 12)	**966**	**968**	**970**	**972**	**974**	**976**	**978**	**980**	**982**	**984**
HOLIDAY DAY (0 - 31)	**967**	**969**	**971**	**973**	**975**	**977**	**979**	**981**	**983**	**985**

INSTALLER MODES SUMMARY

MODE 01. PROGRAMMING MODE. **NEXT 01**

Enter PIN; [n] [n] [n] [n]... , then [NEXT], then the Mode number; [0] , [1] . The <HOME>, <FAULT> and <PWR> Lamps on the LED Terminal will flash simultaneously.

MODE 02. DEFAULTING THE CONTROL MODULE. NEXT 02

Enter PIN; [n] [n] [n] [n]... , then [NEXT], then the Mode number; [0] , [2] . The <HOME>, <FAULT> and <PWR> Lamps on the LED Terminal will flash simultaneously.

Select the Default Option: Press [ON *] , then the Default Option [n] [n] (1 or 2 digits), then [ENTER]

Option 0: The Control Module memory is completely cleared with the exception of the Installer and Master User Codes.
Options 1 to 16: The Control Module memory is defaulted to the Factory settings AND the number of Zones specified by the Option selected, are programmed into Area 1.
Option 49: The Master Code is defaulted to the Factory setting and all other programming is left intact.

CAUTION: Defaulting the Control Module will erase all current programming stored in the memory before implementing any Factory default settings. (Except for Option 49)

Reset the Control Module: Disconnect the AC Input and the Battery from the Control Module, then re-connect.

MODE 03 / MODE 04. IMPORT/EXPORT DATA FROM/TO THE PROGRAMMING KEY. NEXT 03/NEXT 04

Connect the Programming Key to Serial Port 0 on the Control Module.

Import Data from the Programming Key to the Control Module: Enter PIN; [n] [n] [n] [n]... , then [NEXT], then the Mode number; [0] , [3] .
Export Data from the Control Module to the Programming Key: Enter PIN; [n] [n] [n] [n]... , then [NEXT], then the Mode number; [0] , [4] .

The Lamp on the Key will flash to indicate data is being copied. The Terminal beeper will sound 3 short beeps if the operation was successful, or 1 long beep if unsuccessful.

MODE 05. TERMINAL AREA PROGRAMMING. **NEXT 05**

Select the Terminal Programming Mode: Enter PIN; [n] [n] [n] [n]... , then [NEXT], then the Mode number; [0] , [5]

Select the Terminal Area Mode: (Not relevant to Enhanced Terminals which cannot be set to Multi-Area)
Press [ON *] to Set the current Terminal to Single Area Mode. Press [OFF #] to Set the current Terminal to Multi Area Mode.

When Single Area Mode is selected, the default “Associated Area” is Area 1 (General Area)

Select the Associated Area: (Single Area Mode must be selected in the previous step) Press the number [n] (1 to 4) of the Area.

How to Enter Data. Select Address: Press [OFF #], then the Address [n] [n] .. (2 or 3 digits), then [ENTER]. NOTE: Pressing [OFF #] [OFF #] will take you to the next Address.
Enter Data: Press [ON *], then the new Data [n] [n] .. (1-16 digits) OR Option to Select/De-select [n], then [ENTER]. NOTE: [ON *], [CLR], [ENTER] sets Data/Options to Factory Default.

USER PROGRAMMING. **NEXT 20** Section 11. p1 & 2. or User's Manual Chapter 4.1

USER NO	NAME	PIN CODE CAUTION: Keep PIN Code records secure.	CARD ID	USER TYPE 0 - Arm Only 1 - Arm/Disarm 2 - Arm/Disarm/Isolate 3 - Master	USER AREAS 1	2	3	4

Program a User. 1) Select User: Press [OFF #], then the User number ['n'] ['n'] .. (1 or 2 digits), then [ENTER].
2) Enter the PIN code: Press [ON *], then the new PIN ['n'] ['n'] ['n'] ['n'], then [ENTER].
3) Assign User Type: Press [HOME], then [ON *], then the User Type ['n'] (1 digit), then [ENTER].
4) Assign Area/s: Press [HOME], then " [ON *], ['n'] (Area no), [ENTER] " for each Area to Select/Deselect.

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